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ABSTRACT

The central theme of the Lagos, Nigeria, seminar/workshop was recognition for the teaching profession, particularly as being the most important educational change agent. Part 1, "Thematic Issues" includes: "Language Curriculum and Teaching in Multilingual Environments" (Sharmila Pillai); "The Situation in Nigeria" (E. O. Adeniyi); "The Situation in Gambia" (E. O. Adeniyi; E. C. Umeano); "Science, Technology and Mathematics Teaching through New Delivery Systems" (Sharmila Pillai); "Innovative Ideas and Techniques for Science, Technology and Mathematics Education in Africa" (J. O. E. Otuka); "Vocational and Technical Education in Nigeria" (R. N. Oranu); "Science and Technology Teaching Confronted with New Curricula in Nigeria" (R. N. Oranu); "Strategies for Teachers Coping with the New Curricula" (R. N. Oranu); "Emerging Issues in African States and Their Implications for Curriculum Development" (Sharmila Pillai); and "Emergent Curriculum Issues: How Are Teachers Coping?" (Ebele J. Maduewesi). Part 2, "Country Reports/Rapports Nationaux" includes: "Cap Vert" [written in French] (Ana Cristina Pires Ferreira); "Gambia" (Fatuo Njie); "Ghana" (M. Attar); "Liberia" (J. A. L. Tarlowoh); Mali [written in French] (Abou Diarra); "Niger" [written in French] (S. Aboubacar); and "Nigeria" (Gidado Tahir). Annexes contain the program and participant list. (BT)

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STRATEGIES FOR INTRODUCING NEW CURRICULA IN WEST AFRICA

STRATÉGIES D'ADAPTATION DES NOUVEAUX CURRICULA EN AFRIQUE DE L'OUEST

FINAL REPORT OF THE SEMINAR/WORKSHOP HELD IN LAGOS, NIGERIA, 12–16 NOVEMBER 2001

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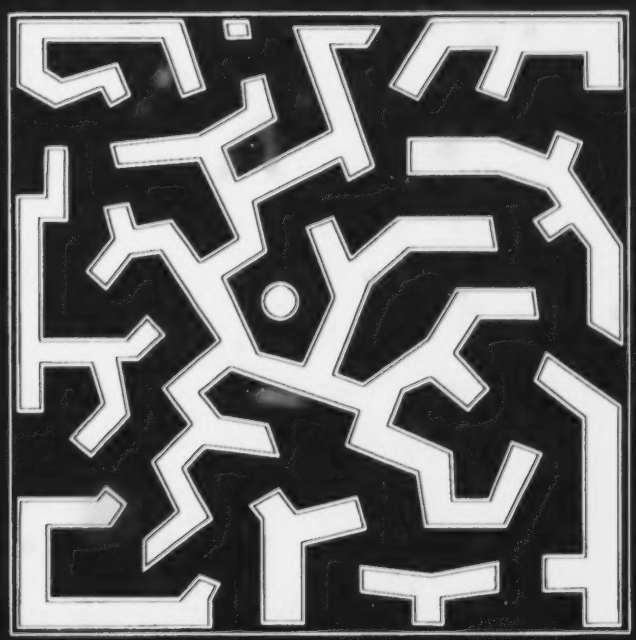

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Foreword

Chief S.K. Babalola

This report is the outcome of a five-day seminar organized by the International Bureau of Education, in collaboration with the Federal Ministry of Education of Nigeria, the Nigerian Educational Research and Development Council (NERDC) and UNESCO's Abuja Office, which took place at the Administrative Staff College of Nigeria (ASCON), Badagry, Lagos State.

The main objectives of the seminar were to meet the demands and difficulties of teachers in coping with a new curriculum by analyzing the existing curricula in order to pinpoint problems with a view to bringing about solutions to them through dialogue. It was indeed an effort in shared promotion of quality education in the West African sub-region. The whole exercise adequately demonstrates the partnership existing between Nigeria and UNESCO/IBE (International Bureau of Education), the principal organizers of the seminar.

There have been a number of conferences on education that have taken place in recent years in Nigeria. Conferences, seminars or workshops ensure a meeting of minds and facilitate the exchange of ideas. The seminar/workshop under reference is yet another in the series of such seminars, but this time it is an African sub-regional curriculum seminar in which Cape Verde, Gambia, Ghana, Liberia, Mali, Nigeria and Niger took part with their professional experts in attendance. In order to bring to focus the significance of this seminar to Nigeria, it may be necessary to mention briefly its historical antecedent.

In the first decade after our independence, critics of the Nigerian system of education tended to see it as a colonial heritage perpetuated by the agents of imperialism. This, they argued, made it irrelevant to the Nigerian situation. For example, one major criticism of the 6-5-2-3 system of education then in use was that it was irrelevant to the career aspirations of the people as it mainly prepared the youth for white-collar jobs. In response to the criticism, efforts were made in 1976 not only to expunge from it the so-called British trappings in order to make it a completely Nigerian system but also to design a new policy reflective of our new independence. The 6-3-3-4 education system, generally described as the new national policy on education, was introduced and a new school curriculum specially designed towards producing individuals well prepared for useful living within the society, for empowerment, self-realization, effective citizenship, scientific and technological awareness, democracy and national unity was introduced during General Olusegun Obasanjo's first advent in office as the head of state under the military.

This document is the report of an African sub-regional curriculum seminar held in Badagry 12-16 November 2001. The seminar/workshop included fruitful interactions and constructive exchange of ideas by participants at the meetings where national and international experts made their presentations on selected topics. As recorded in the report, the workshop aspect of the seminar established an effective platform for the exchange of information on curriculum content and presented on a comparative basis, the profiles of national education systems with particular emphasis on:

1. language curriculum and teaching in multilingual environments;
2. science, technology and mathematics teaching through new delivery systems;
3. emerging issues in African states and their implications for curriculum development.

In view of current changes in technology, new advances in learning and the inherent challenges arising from our curriculum renewal and reform, there is need for radical changes in teaching and learning methodologies. Once the desirability of adopting rich and flexible curriculum frameworks has been recognised, then alternative ways will need to be found for promoting teaching and learning methodologies different from those used in the past, moving away from a rigid, prescriptive approach in classroom work.

Two more issues highlighted in this report deserve special mention. First, in the keynote address and several presentations of the various experts, the report acknowledged that teachers constitute a central part of any education system. They are portrayed as largely responsible for the translation and implementation of educational policies, active participants in curriculum development, producers of instructional materials and assessors of learning outcomes. Teachers are also described as exerting a great deal of influence on the character formation and the process of socialisation of the children placed under their physical, social, mental and emotional care.

Secondly, the report also demonstrates that the efficiency of our educational programmes in this sub-region greatly vary not only on the quality of the teachers but also on the adequacy of the curricula which should be reviewed periodically to reflect the dynamism of education in our changing societies.

For these important roles, therefore, a recommendation is made in the report that demands that teachers must engage in active capacity building through self-development, life-long education, professional training and retraining to help them develop confidence and competence in their professional work.

Summaries of the various presentations and the deliberations on these topics that followed are well documented in this report.

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Introduction

Nigerian National Commission for UNESCO

This seminar/workshop was organized by the IBE, in co-operation with the Federal Ministry of Education of Nigeria, and with practical assistance provided by the Nigerian National Commission for UNESCO, the NERDC and UNESCO's Abuja Office. Other partners in the seminar/workshop included Ministries of Education of West African Member States, and the institutions to which the invited international experts belong.

The Nigerian Workshop considered both the conceptual and managerial challenges of education for living together, taking into account both regional and global aspects and focusing on 'Teachers Coping With New Curricula in the West African Region'.

Throughout the Seminar/workshops there was a central theme of recognition shown for the teaching profession. Ideas, programmes, curricula, syllabi, textbooks and other tools are all intended to bring about a change in education, but the most important educational change agent is the teacher. Teachers can become better partners in the educational process by engaging in active capacity building through self-development, education training and re-training.

It was suggested in some of the seminars, that teachers needed to be given compassionate attention to enable them to cope with the emerging curriculum. An example taken from Nigeria illustrates this well:

- *Orientation/in-service/workshop:* any of the listed methods should be adopted in helping teachers to understand how to teach with the modular or modified modular teaching. The teacher has been taught using the lecture-project method; therefore, he needs orientation to properly adapt to the system. Presently they adopt the lecture/project method for teaching.
- *Textbooks* the teacher can cope with the scarcity of textbooks by being encouraged by the Government to write. In Nigeria most professional publishers look for large markets before accepting manuscripts for publication. Teachers should, therefore, be encouraged to write, as there is evidence that teachers' have written some manuscripts, but were unable to get them published because of the cost of publication. Some of these teachers use their manuscripts and teach while others get local printers to print the text.
- *Content-driven curriculum and examination-centred syllabi:* teachers spend extra hours after school trying to cover the content of the curriculum and to prepare students for their examinations. Teachers usually charge some fees in order to provide the extra hours of service.
- *Medium of instruction:* many teachers resort to the students' native language to drive home their points while teaching. Problems arise when the terminology is not in the native language. In this situation, the teacher tries to explain using even 'pidgin English'.
- *Improvization of teaching aids:* most teachers in the field of vocational and technical education need teaching aids to illustrate their lessons. When the aids are not available many dedicated teachers produce these teaching aids themselves or use the blackboards to illustrate their lesson.

It is in order to contribute to finding better-adapted and more efficient solutions to the problems facing education systems in sub-Sahara Africa that the International Bureau of Education (IBE) in collaboration with the Federal Ministry of Education organized a seminar/workshop in Lagos, Nigeria, 11-17 November 2001.

The main issues of the workshop included these three thematic structures:

- language curriculum and teaching in multilingual environments
- science, technology and mathematics teaching through new delivery systems
- emerging issues in African states, and their implications for curriculum development.

In section I of this report an introduction to each of the above-mentioned themes is followed by presentation papers and section II of the report comprises reports presented by each country that participated in the seminar/workshop. The last section of the report annexes the programme and names of participants.

For several years, the IBE has been organizing seminars on curriculum development in different regions of the world. These seminars aim to promote the exchange of experience and to assist in meeting the common and specific needs of countries through networking and new approaches to the management of curriculum change and improvement.

In Africa south of the Sahara, many countries are confronted with major difficulties, especially in the field of education. Access, retention, relevance, failure, drop outs, illiteracy and lack of relationship between learning and local needs are some of the problems affecting education.

Finding adequate solutions to these problems has become an important challenge to many governments. The issues of the curriculum, and of curricular reform and development, are among the main preoccupations of States.

One of the lessons learned from the experiences of many countries on the matter of curricula is that, in order to contribute better to education for living together, it is necessary to improve approaches to curriculum management.

PART I:

THEMATIC ISSUES

1. Language curriculum and teaching in multilingual environments

Sharmila Pillai

In human society, communication between people is a necessity of life. Language is of prime importance in communication among individuals and between groups, and is also fundamental in forming and expressing both individual and group identities. If communicating in a language other than one's own is problematic, then receiving one's education in such a language is even worse, and this is the case in initial literacy teaching in most African countries. As noted in *Language in education in Africa*:

> When instruction is supplied in the native language, the expansion of known concepts and acquisition of new ones—achieved from childhood, in the native tongue—can proceed smoothly and naturally and is not hindered or complicated by the additional learning hurdle of having to acquire the matching linguistic tools in another language (Rubagumya, 1990, p. 7).

In most cases African pupils receive their education in a language that is an L_2 or foreign language. The document *Mother-tongue education in Africa: A reader*, observes that, 'for the great majority of sub-Saharan countries [...] (twenty-two out of thirty-nine countries), instruction is still in the respective colonial language, as if for these primary school systems, national independence had never been achieved' (Komarek, 1997, p. 11). We find that the majority of children start their lives by learning a language that they will never use in a classroom. Looking at the report on Organization of African Unity's (OAU) strategy for linguistic unity and multilingual education, Mateene expressed the need for the 'home and street languages [to] enter the classroom, to make education easier and more relevant to the society' (1996).

A recurring theme in the seminar is that teachers are poorly trained and poorly equipped, and the observation applies as much to linguistic as to other abilities. The graduates of this system no less than the learners are individuals who have been hampered by linguistic deficiencies in their thinking, in their critical observation, in their questioning of ideas and facts, and in their interpretation in what is communicated to them. Teachers and learners alike are attempting to function in foreign tongues.

Questions relating to language curriculum and teaching in multilingual environments were deliberated upon in the workshops that were conducted. The theme outlined above was approached through the following three questions:

1. What languages are going to be taught and who makes the decision?
2. How are these languages going to be taught?
3. What happens during the transition from mother-tongue to the language of instruction?

The participants observed that, with regard to question (1), language experts, researchers and government functionaries are in a position to select the languages to be taught. To quote extensively from Komarek's (1997) discussion of mother-tongue education:

> Whatever has been said and written about the language situation in Africa, the implicit or explicit result is always the same: African language politics are power politics. It is therefore quite normal that a change in political power be accompanied by a change of language (Mateene, quoted in Komarek, 1997). No radical change in power in Africa comes without a radical change in linguistic policy.
>
> The influence of power politics on African linguistic policy is most clearly evident in the retention by the power elite of the colonial languages as official languages. In so doing, the elite ensures its exclusive access to information, prevents self-determination and thus sharing of power by others (p. 15-16).

Political considerations are not the only ones, of course, in language selection. Other criteria guiding the selection of languages include widespread use of the language, existence of standard orthographies in that language and availability of standard textual materials.

Regarding question (2) above, about how languages will be taught, teaching is usually done with emphasis on grammar as well as the development of communicative skills. This point was elaborated in presentations made at the Seminar. For question (3) above, there are usually some difficulties experienced by learners during the transition from mother-tongue to language of instruction. According to Komarek:

> Lessons in reading and writing are to enable the child to translate speech into graphic symbols and back, to write and read. As with any translation from one code to another, translation from sounds into graphic symbols presumes oral mastery of the language to be translated. And, at school entry, this is the mother-tongue, as a rule. So there is nothing better than elementary reading and writing skills in the mother-tongue.

It is unlikely that many children will learn to read well if they do not begin with reading the language that they already know how to speak. However, this does not always happen.

Linguistic diversity is a phenomenon common to most African countries. Multilingual countries display great variety in their choice of the language(s) for national interrelationship. Often a choice is made for one language, occasionally two or three. The language chosen is usually spoken by a majority of the population. It is not uncommon to find either one of the few 'international' languages—often English or French—to be adopted as the 'lingual franca' while local languages are used as medium of instruction or taken as a school subject.

The answer to the question, are we convinced of the relevance of the use of local language and official language? lies in the objectives of the seminar/workshop. In her address, the Director of the IBE, Cecilia Braslavsky, stressed that the choice of language is both pedagogical and political. It may also be economic in the sense that teacher training, materials production and follow-up/monitoring have economic or financial implications. There may also be a psychological aspect to the choice of language related to organising thought and transferring knowledge.

In the seminars that followed, other aspects dealing with language were discussed, and a consensus was reached that it is the people concerned, the stakeholders, who should be involved in the choice of language to be used as a medium of instruction. This fact has to be taken into consideration also by governments, who should be more responsive to the needs of the communities involved. It was also stressed that the communities involved should aim at developing their languages, where each ethnic group should try to develop an orthography of their respective languages to increase its acceptability and utility as a basis for early reading. It was also proposed that parents should encourage the use of the mother-tongue in their homes.

References

Komarek, K. 1997. *Mother-tongue education in Africa: a reader.* Eschborn, Germany, GTZ.

Mateene, K. 1996. *OAU's strategy for linguistic unity and multilingual education.* Addis Ababa, Organization of African Unity. (Presented at the seminar on Education in Africa, University of Cape Town.)

Rubagumya, C.M., ed. 1990. *Language in education in Africa: a Tanzanian perspective.* Philadelphia, PA, Multilingual Matters Ltd.

The situation in Nigeria

E.O. Adeniyi

I. PROBLEMS OF THE NATIONAL EDUCATION SYSTEM

1. Problems affecting the school system in general

The major problems affecting the school system in Nigeria are poor management and control of teacher education programmes, teacher training and retraining, the selection and organization of curriculum content, curriculum implementation and evaluation, the development, distribution and use of teaching materials, and the relevance of the curriculum to the needs of society. Not surprisingly, there is also a problem with poor motivation and discipline. There has been a continual, although not sustained, effort to find better-adapted and more efficient solutions to the problems facing the education system. Sometimes it appears as if solutions are on the way, at other times one feels that the education system is back in the doldrums. One positive note is that both the government and the people are seeking better ways of doing things and achieving results that would benefit the majority of the people.

2. Problems related to curricula

The problems related to curricula became noticeable soon after Nigeria's independence from colonial rule in 1960. By the mid-1960s, educators and educational planners were rethinking Nigeria's education system and in particular, the curriculum being taught in the schools. It was observed, for instance, that the education Nigerians received from the mid-nineteenth century until 1960 was meant to serve colonial purposes.

The National Curriculum Conference of September 1969 was the first attempt by Nigerians to formulate a school curriculum that is relevant to the goals, needs and aspirations of Nigerians. People from all walks of life took part in the conference and made useful recommendations concerning education in general-science and technology, mathematics, arts and humanities, social sciences, vocational and technical education, teacher education, the structure of primary, secondary and tertiary education, and education support services. These recommendations formed the basis for drawing up the National Policy on Education (NPE) of 1977.

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Many people regarded the NPE as both an innovation and as a reform in education. It is a reform in that it introduced a 6-3-3-4 school system incorporating a nine-year basic education programme as a clear departure from the past. The provision for a core curriculum (or core subjects) and optional curriculum (or elective subjects) is also a significant change. The aims of these changes are to guarantee an all-round education for learners, and to bring some degree of diversity into curriculum development.

The curriculum provisions are immense and profound for school teaching and learning. At the primary level, ten subjects are to be taken. Two of these ten subjects—agriculture and home economics—are to be deferred to later years of primary school. At the junior secondary school, every student is required to take eleven subjects, nine of which shall be common to all—core subjects. A major innovation here is the requirement for technical and vocational subjects tagged as pre-vocational subjects. In all, a student may take a minimum of eleven subjects and a maximum of thirteen subjects.

The secondary school level presents a far greater variety of subjects—there are seven core subjects and thirty-four elective subjects. The electives are put into three groups. Every student is expected to take all the seven core subjects, a minimum of one and a maximum of three from the list of elective subjects to be offered at the Senior School Certificate Examination (SSCE).

A few years into the implementation of the curricula, teachers and other school personnel began to perceive some problems facing the implementation of the new curricula, which fell into five categories:

1. overloading of the curriculum and curriculum content;
2. overcrowded classes and timetable;
3. the strain on teachers, learners and material resources of the school;
4. availability of textbooks and other learning aids;
5. level of funding of education.

The curriculum is overloaded because of the high number of subjects that must be taken by students for their certification. Some people feel that the numbers are on the high side. Why should an 11-year-old child be required to study thirteen subjects to be able to pass the JSCE? How much time and concentration can he/she afford on the thirteen subjects? Is it desirable to require an SSS student to take ten or more subjects to qualify for the SSCE? Is there a logical balance between quantity and quality? Are the schools funded enough to afford all materials necessary for functional and meaningful teaching.

Contemporary issues of local, national or global dimension such as HIV/AIDS, family life education, environmental education, the girl-child-education, for marginalized children, and so on, need to be included in the curriculum to make them part of the overall knowledge of the learner. The inclusion of these issues has contributed to the ever-increasing size of the curriculum content.

The rapid population change in Nigeria, which became pronounced in the early 1970s shortly after the exploitation of oil in Nigeria, has resulted in overcrowded classes. An average classroom in the primary or JSS contains seventy to 120 pupils at any given time. This puts added stress on school personnel, resources and school scheduling, teacher workload, classroom management and the maintenance of order and discipline. The problems are aggravated with inadequate school supplies.

The problems of book scarcity and the cost have hindered the successful implementation of many laudable educational programmes and curriculum projects. The problem of supply of instructional materials in the school system has been summarised by Ivowi (1998 p. 25) as follows:

1. inadequate quantities of available materials either in the finished or raw form;
2. high cost of production leading to unaffordable cost of books;
3. poor distribution network owing to low performance by booksellers;
4. low capital base for marketers; and
5. low income of parents who pay for these instructional material.

3. Funding is perhaps the greatest bane

There are constantly competing demands for financial resources by all sectors of the economy, and the education sub-sector (under the social sector) is not an exception. The genesis of this problem goes back to the early or mid-1970s when many educational reforms took place, and when 'petrol Naira' was prompting gigantic plans and programmes by governments. But all that has changed now. The rapid change in Nigeria's population was also a contributing factor. The alarming growth rate became much evident with the introduction of the Universal Primary Education in 1976, when it was discovered that the enrolment in the programme far outstripped the projections of government educational planners. Many primary and secondary schools were hurriedly built to accommodate the reform in education, and the funding of these establishments has remained a major problem.

4. Problems related to the language curriculum

In order to appreciate the language problems better, it helps to know that Nigeria has some 400 indigenous languages, including Nigerian Pidgin, and recognizes a number of foreign languages, including English, Classical Arabic, Kiswahili, French, Portuguese, German and Russian. The exact number of Nigerian indigenous languages is unknown. Emenanjo (1995) has described three broad classes of Nigerian languages, using the criteria of: (a) number of speakers; (b) readiness for literacy; and (c) status in education and current use as a desired second language. He tagged them as the developed, the developing and the underdeveloped languages.

The developed languages are those with stable orthographies, standard written forms and large bodies of written material. These are Hausa, Igbo and Yoruba, estimated to be spoken either as native or as second language by about 60%-70% of the population (Bamgbose, 1992). The developing Nigerian languages include some sixty languages with populations ranging between 100,000 and 1 million speakers (see Emenanjo, 1995). These languages include Edo, Urhobo, Igala, Tiv, Efik, Ibibio, Izon, Kanuri, Fulfulde and Nupe. Most of these languages are not being used as media of instruction in primary education although the Nigerian Educational Research and Development Council (NERDC) has developed orthographies for at least nine of them.

The undeveloped languages are used by small groups of people, each of them with a population of less than 10,000 speakers. The languages are endangered for many reasons, the most important one being the absence of orthographies or standard forms—one reason being the languages are not part of the school curriculum. A major problem of language curriculum is the large number of languages to be developed coupled with the problem of setting the criteria for choosing the ones to be developed and in what order.

The basic philosophy or aim of language curriculum development is to design, implement and evaluate an instructional package in languages. Its main objective is the inculcation of basic communicative skills. Ihebuzor (1992) has identified four groups of languages taught in the Nigerian school system, each with its own aim. They are:

1. English;
2. Foreign languages (French, Arabic, etc.);
3. Nigerian languages as L_1; and
4. Nigerian languages as L_2.

For English, the aim is to develop functional competence in the subject. For the foreign languages (Arabic, French) the aims are concerned largely with inculcating basic communicative skills in these languages as a way of ensuring greater inter-regional co-operation between Nigeria and its neighbours.

For the Nigerian languages as first language (L_1), i.e. the language of the immediate community or mother-tongue, the goal is to enable the child to acquire the ability to read and write in his/her first language. For the Nigerian languages as second language (L_2), the goal is similar to that pursued for foreign languages except that the focus is on ensuring intra-national or inter-communal communication using these Nigerian languages as media.

Curriculum guidelines for teaching Hausa, Igbo, and Yoruba as L_1 have been developed and are in wide circulation, but are still in the testing stage. Some states have been reported to have drawn-up standard guidelines for dominant language(s) in their domains. The L_2 programme stresses the oral skills. The aim is to give the child a working knowledge of the 'other language'. Instructional materials are not yet fully available for these languages as L_2.

A fundamental goal of teaching Nigerian languages as L_1 and L_2 is to forge national unity and understanding. It has been suggested that the practice of studying the mother-tongue or the language of the immediate community as L_1, and taking the other language from among Hausa, Igbo and Yoruba as L_2 could solve the language impasse (see, for example, Marinho, 1992). The NERDC has developed teaching curricula for the major languages both as L_1 and L_2.

There are indications that there is some malfunctioning in the language curriculum. Performance levels in English, and participation rates in Nigerian languages are far form encouraging. And up until recently, the influence of performance in language or the performance in mathematics, science and technology have not been established, even though there are strong indications that the former affects the latter.

The methods currently adopted in implementing language curricula in Nigeria rely more on a traditional grammar approach. This classroom method is strongly at variance with the stated objectives and recommended methods for most language curricula in Nigeria. Most textbook authors and publishers also rely on traditional grammar-based approaches.

Language teachers are in short supply, non-qualified teachers are teaching English and some States of the federation tried using any available native speaker to teach the language in question as a second language.

Learner problems in language stem from two sources: interference from languages that they already speak (for English, the mother-tongue and pidgin; for foreign languages from English and mother-tongue; and so on); and most Nigerian learners are poorly motivated to learn languages in the formal school system owing to anticipated low rewards.

There is a dearth of language instructional materials (textbooks, supplementary readers and reading materials, primers, etc.) Instructional technology is markedly absent in language teaching. The net effect of all the above is:

1 very poor results;
2 very low levels of actual communicative ability;
3 low enrolment rates;
4 a high attrition rate; and
5 insufficiency of teachers.

II. SOLUTIONS OR TENTATIVE SOLUTIONS

1. Solutions concerning the education system.

A drastic review that would lead to downsizing the number of curricula in the JSS and SSS to reflect the prevailing social and economic conditions of Nigeria is necessary. At the inception of the new school curriculum, the economic and political situations were a little stable, unlike the present. The review should focus on an appropriate number of core subjects and elective subjects at the JSS and SSS levels. It may be necessary to merge

some school subjects to promote interdisciplinarity, to reduce the strain on the teachers and pupils and to reduce the cost of education and strain on the short supply of material resources.

Another possible solution is for the government to popularise the idea of participatory management and funding of education. By this we mean greater involvement of Federal, State and local Governments, communities, organisations and individuals. The new Universal Basic Education Programme (UBE) is promoting this idea. The slogan, *education for all is the responsibility of all,* is a good beginning and an attempt at entrenching the ideal of an all-inclusive participatory approach to the management and funding of education.

A strategy for achieving this proposal can be drawn from the Indian experience whereby education districts comprising not more than 500 schools are managed and funded by the locals, while government provides incentives and encouragement by giving grants, donations, tax relief, awards, etc., to successful school districts.

2. *Solutions addressing curricula problems*

The curricula should be more sensitive to the culture of the people they were meant to serve. There should be a significant shift towards the formation of competencies instead of transmission of information. Curriculum developers should also adopt the interdisciplinary approach to curriculum especially at the primary and junior secondary school levels.

Emphasis should be on the changing needs of the society through reliance on the understanding and application of new technologies. This implies that emergent issues (local, national or global) should become a curriculum development concern. The content of curriculum should be given a wider interpretation to include concepts, principles, values and skills. The content should promote curriculum diversity by relying more on multiple approaches and designs of curriculum.

III. REFORMS

With the advent of the new National Policy on Education, a major reform was noticeable with regard to language curriculum development and implementation. Whereas during the colonial era the emphasis was on learning the languages of the colonizers it is no longer so nowadays. The language curriculum currently in use takes into account four groups of languages—English, foreign languages, Nigerian languages as L_1 and Nigerian languages as L_2. Curricula and teaching materials have been developed for each of these groups.

Nigeria now has an explicit national language policy. But Nigeria has made a number of explicit statements about the language issue in the policy (Emenanjo, 1992). Those statements can be gleaned form several official publications of the government such as the National Policy on Education. The implicit national language policy in Nigeria stipulates:

1. the use of Nigerian languages in formal and non-formal education;
2. the use of the developed Nigerian languages as co-official languages with English;
3. the study of the developed Nigerian languages;
4. the study of all Nigerian languages as subjects and as media of instruction at certain levels of formal education;
5. the study of French and Classical Arabic as electives at all levels of formal education;
6. the study of such foreign languages as French, Portuguese, German, Russian and Kiswahili as subjects at the university level.

The reforms that have been affected in language usage and studies have not been implemented in the way the reforms were conceived. A major constraint has been the inadequate numbers of teachers to teach the four groups of languages. Even where teachers are available, the methods adopted in teaching the language curricula rely heavily on a traditional grammar approach.

There is also a dearth of language instructional materials. All these contribute to the low level of implementation leading up to poor results and a very low level of communication skills.

IV. CONCLUSION

We have presented an overview of many crucial issues involved in language curriculum development and implementation in Nigeria. It also considered linguistic liberalization and reforms embedded in the revised National Policy on Education, as well as the formal structures established by government for the realisation of language development issues. There are still many problems to overcome and challenges to tackle. Language policies and reforms can only succeed when education for all becomes the responsibility of all.

References

Bamgbose, A. 1992. *Implementation strategies of the language provisions of the National Policy on Education.* Abuja, NERDC.

Emenanjo, E.N. 1992. Languages and the national policy on education: implications and prospect. *In:* Ipaye, B., ed. *Education in Nigeria: past, present and future: essays in honour of Professor A.B. Fafunwa,* vol. 1. Lagos, Macmillan.

——. 1995. *Issues in African languages and linguistics.* Aba, Nigeria, NINLAN Books.

Federal Republic of Nigeria. 1977. *The National Policy on Education.* Lagos, Federal Press.

Ihebuzor, N. 1992. *Language curriculum development in Nigeria: issues, problems and prospects.* Lagos, Federal Ministry of Education, ICNPE. (National School Curriculum Review conference proceedings.)

Ivowi, U.M.O. 1998. Curriculum and content of education. *In:* UNESCO Abuja Office, ed. *The state of education in Nigeria.* Lagos, Excellence Systems Limited.

Marinho, H.E.G. 1992. *Language study and the Nigerian school curriculum.* Lagos, Federal Ministry of Education, ICNPE. (National School Curriculum Review conference proceedings.)

The situation in Gambia

E.O. Adeniyi and E.C. Umeano

The 1988–2003 Education Policy calls for a new curriculum, which is the introduction of National Languages at the lower basic level, i.e. grades 1 to 3, as a means of communication and English as a subject.

At present, the standard of English is not very good. The Monitoring of Learning Achievement (MLA) study, which assesses the learning achievements of pupils in grade 4 in the core subject areas (mathematic, English language, science and social and environmental studies) and the conditions that affect teaching and learning in primary schools in Gambia, showed that the national performance in English had a mean of 39.83% and a standard deviation of 18.20. More than 90% of the pupils who took the test did not attain the mastering level of 73.33% (i.e. twenty-two out of thirty test items). It is understood that language skills are essential to learn languages as well as to learn other curricula programmes. English being the medium of instruction in Gambia, its importance cannot be over emphasised.

Currently, pre-reader series for Mandinka, Wolof, Fula and Jola—the four area languages to be adopted in the curriculum—are being tried in five of the six educational regions. Because of the poor performance of students in English, the policy is advocating a change to national languages at the base.

The language curriculum is facing new challenges. Not all teachers can deliver the English syllabus effectively; some teachers were trained years ago and need to be re-trained, or are unqualified and need training. Although the units concerned have embarked on massive training, there is still more to be done as this is manifested in the teaching/learning process in the classrooms, which are faced with the following obstacles:

- lessons are academic and lack practical activities;
- very little teaching/learning materials exist in most classrooms;
- most teachers need to be trained in the use of the teacher's guide;
- supervision by senior teachers is lacking in most schools;
- the mode of teacher preparation leaves much to be desired in some schools;
- for the new curricula, not all teachers can speak all the local languages and will therefore need to be trained, which will require more time and resources;
- a large percentage of pupils only speak English in school but, since most parents are illiterate in English, there is no continuity and support for the pupils at home.

2. Science, technology and mathematics teaching through new delivery systems

Sharmila Pillai

The challenge facing African science, technology and mathematics (STM) educators is how to better use existing resources to achieve their new goals. STM teachers have to set up classroom routines using available resources and routines that they believe are practical, innovative and creative. They must 'devise instructional strategies that will ensure meaningful learning in spite of scarce resources' (Black & Atkin, 1996, p. 144).

Science and technology education are among the main forces driving social change in Africa. Each nation's science and mathematics goals depend very much on where it perceives its present schooling deficiencies to lie. But we also see that many countries share both goals and deficiency assessments.

A goal shared throughout Africa is to help students understand how science, mathematics and technology relate to personal and social issues. In current education, as part of the colonial legacy, these areas are presented to learners as separate topics with little connection. According to Black and Atkin, if school science and mathematics reflected more authentically real-life science and mathematics, then boundaries between disciplines would be bound to break down, (1996, p. 41).

As mentioned above, STM goals are related to perceived deficiencies. Principle among these is the fact that many African learners perceive mathematics as being difficult, often because the methods of teaching do not capture their interest. Researchers have shown us that students can only begin to grasp a novel idea when it is placed in a familiar context. When unrelated and fragmented pieces of knowledge are offered to students, most learners will not be able to connect with the ideas they have been taught in real life and will probably forget them. To remedy this problem, students must be actively involved in the process of learning (Black & Atkin, 1996, p. 62).

This goal, however, leads straight to a second and more difficult deficiency. Teachers are the ones who will be charged with implementing the type of innovations mentioned above, and they are often ill prepared to handle such innovations. For one thing, most teachers simply do not have the background or knowledge to teach outside their specialties in any sort of multi-disciplinary venture.

For another thing, most teachers emphasize a theoretical approach, which makes learning dull. Research shows that they tend to adhere to, for example, the mathematics that they find in their textbooks and show reluctance to move away from it. In other words, the textbooks determine the mathematics teaching that takes place in the class. Teachers rely on the subject matter that they are familiar with, which gives them a sense of authority and self-confidence in the classroom. But with the introduction of STM, teachers are expected to plan new integrated topics and incorporate new teaching methods and learning aids.

They are expected to plan and deliver content that has meaning for students, content that relates across the subject boundaries to real-life situations, and personal and social issues. As Black and Atkin (p. 66) aptly put it:

> Phenomena and issues in the real world are seldom confined within the boundaries of any single discipline. The result for school science is a broader conception of what is authentic: a conception that draws out the actual and everyday connects between scientific and mathematical knowledge on one hand, and human need on the other.

As discussed at the seminar, such connections are more likely to emerge within child-centred approaches to science and mathematics (discovery learning, collaborative project work, etc) than in teacher-centred approaches (lecture method) and rote learning. Activity-oriented approaches, interactive and participatory methods allow for both knowledge construction in a familiar context and the emergence of connections across subjects areas. One of the innovations taking place in science teaching worldwide has been the move to include more 'hands-on' activity. This gives students greater responsibility for their own activity and the experience of making things with their own hands. Students pursue topics through experimentation, field trips and by using computers to share data and ideas with other students and schools. Video and computer materials can serve to broaden the contexts and learning activities.

Another point that was brought up at the seminar was that teacher incentives are not very credible, and that teachers often leave for other jobs. Those teachers who do remain in their jobs are often unmotivated, and the teaching they carry out is abstract and not related to the real-life situations that a student faces or will have to face

in the future. They are not interested in making mathematics fun by taking examples from the life experiences of the learners themselves. Subject integration, group learning, activity work and new contexts all affect the aura, the perceived character of a subject in the eyes of students.

One of the presenters at the workshop recommended and tried out innovations and techniques based on the Harare Generator and the African Forum for Children's Literacy in Science and Technology (AFCLIST) as they relate to STM delivery at the basic level. The activities relevant to STM instructions at the basic level are:

- encouraging more pupil involvement;
- developing creativity and thinking;
- using real-world resources.

AFCLIST aims to generate popular understanding in young Africans of the practical applications of science, technology and mathematics. We believe that this understanding must be based on interactions between learners and their environment, peers, teachers, other adults in the community, as well as with the accepted practices of both science and local cultures.

References

Black, P., Atkin, M. 1996. *Changing the subject: innovations in science, mathematics and technology education.* Padstow, United Kingdom, T.J. Press.

Innovative ideas and techniques for science, technology and mathematics education in Africa

J.O.E. Otuka

Some innovative ideas and techniques for science, technology and mathematics education (STM) are part of the Harare Generator and African Forum for Children's Literacy in Science and Technology (AFCLIST) activities highlighted in this paper. Other related instructional issues such as: information and communications technology (ICTs), concept maps and teachers are also discussed. In addition, special attention is given to the Think & Do activity-based science teaching for primary schools, an offshoot of the Harare Generator, which the writer has developed further.

I. INTRODUCTION

Educational goals in Africa, as elsewhere, change as society evolves. Following independence, the countries of sub-Saharan Africa had to educate high- and middle-level manpower rapidly to fill the gap left by the departing colonial powers. This goal has been achieved long ago. As a priority, therefore, all African countries ought to set new goals and many have done so. Such goals now focus on promoting a relevant quality of scientific and technological literacy for all at the basic level of schooling. Most African countries, however, continue to use the old implementation priorities, content and practices and have yet to implement a style of STM education better suited to achieve the new goals in ways that meet current cultural, social and economic realities. Thus the challenge facing African STM educators is how to better use existing resources to achieve their goals, enabling students to use these disciplines to contribute to personal, community and national development (Naidoo & Savage, 1999).

On the other hand, the world's poorest nations are found in this continent, and many spend large percentages of their foreign exchange earnings on debt repayment, leaving inadequate funds for social programmes required for the good governance and economic development for which all stakeholders aspire. In such an economic climate, expectations of government support to education cannot be high. For example, the bulk of available educational funds go to pay teachers' salaries that, in most African countries, will only satisfy family needs for at best two weeks of the month. Consequently, less and less funds are spent on support structures, such as textbooks and laboratory facilities. With increased access to school, efficiency in terms of value for money and quality has fallen. Yet such deterioration is not due to a lack of commitment to education. Many countries spend up to 40% of recurrent government budgets on education and there are estimates that over 60% of the rural families cash income goes on school fees. Those involved in making and implementing government educational policy must recognize that, for the foreseeable future, the educational sector is likely to be granted less—not more—funds in real terms. This calls for concerted efforts by STM educators to

devise instructional strategies that will ensure meaningful learning in spite of scarce resources.

II. INQUIRY TEACHING AND LEARNING:

In spite of opposition by scholars, such as Matthews (1994), Jegede (1995) and others, constructivism has in recent years played a major role in designing school curricula and teaching strategies. Driver and Bell (1986) have summarized constructivist views of learning as:

- Learning outcomes depend not only on the learning environment but also on the knowledge of the learner.
- Learning involves the construction of meanings. Meanings constructed by students from what they see or hear may not be those intended. Construction of meaning is influenced to a large extent by our own existing knowledge.
- The construction of meaning is a continuous and active process.
- Meanings once constructed are evaluated and can be accepted or rejected.
- Learners have the final responsibility for their learning.
- There are patterns in the types of meanings students construct due to shared experiences with the physical world and through natural language.

With the constructivist approach dominating the curriculum designs, developments and reviews of the last two decades, science delivery by inquiry took different forms in what I call the constructivist inquiry approach. According to Welch (1981):

> instruction inquiry classrooms reflect a variety of methodologies—discussions, investigative laboratories, student initiated inquiries, lectures, debates. Teachers serve as role models in deliberating issues, in examining values, in admitting error and in confronting areas of their own ignorance. The class atmosphere is conducive to inquiry. It is easy for students to ask questions. Risk taking is encouraged and students' responses are listened to, clarified, and deliberated upon with high frequency of student-student transactions. Classroom climate stimulates a thorough, thoughtful exploration of objects and events, rather than a need to finish the text. Inquiry transactions are concerned with students' developing meaning. Thus, in an inquiry classroom there is a time for doing [...] a time for reflection [...] a time for feeling [...] and a time for assessment.

The Think & Do approach to primary science teaching, which will be described later, is based on the constructivist inquiry approach. Much of the instruction in STM at the basic level should be inquiry oriented.

I wish to share some recommended and tried innovations and techniques for teaching in Africa. Specifically, I wish to dwell on the Harare Generator and AFCLIST recommendations and inputs as they relate to STM delivery at the basic level.

1. The Harare Generator

The Harare Generator was an event held at the University of Zimbabwe with a follow-up at the University of Malawi (1997) in which African science educators and their foreign counterparts, mainly from the United Kingdom and the United States of America, shared experiences and generated new ideas and innovations for science teaching and teacher education in Africa. The participants in the Harare Generator had the opportunity to listen to the accounts of innovations taking place in other countries and to benefit from the participatory team experience of brainstorming, planning, adapting, modifying and testing new ideas under pressure of deadlines and limited resources. The participants, who were frequently called upon to do these things at home under severe time and financial constraints, enjoyed the opportunity to collaborate at the conference with specialists with varied backgrounds and experiences. The participants gained from the Generator new ideas and renewed vigour in their regular tasks, and the necessary motivation to set up similar projects in their own countries.

The Harare Generator package given to those involved with African science education consists of a book describing the experience and outcomes of the eighteen group projects and suggests various ways in which these could be used in science education in Africa. The package also includes a three-hour videotape of classroom scenes and interviews with teachers and students (Whittle, 1993).

The activities of the generator relevant for STM instruction at the basic level are:

1. Encouraging pupils' involvement in:
   - games and role play;
   - discussion techniques;
   - using case studies;
   - picture stories.
2. Developing creativity and thinking through:
   - Think & Do;
   - young scientists competitions;
   - problem-solving and decision-making.
3. Using real-world resources, such as:
   - national tree planting;
   - using local resources;
   - collecting and interpreting information.

2. The Think & Do approach

Participants of the Harare Generator highly recommended the Think & Do approach for adaptation and adoption by African countries.

The central theme in the Think & Do approach is the concept of challenge. This is the exploration of science, which develops young pupils' abilities to plan, affect, interpret, draw inferences and communicate the outcome of the activities. Critical thinking skills are applied in interpreting the challenge, recalling relevant experiences and designing a solution. This involves negotiations with others, as well as clearly sorting out what procedures will be followed and what equipment used. It also requires the group to plan what they will be observing and meas-

uring, and how this may be done effectively. There are various interpretations of the sequence of events in a science process.

The Think & Do, which was originally developed by Sue Dale Tunnicliffe, has been adapted for the Nigerian primary science programme (Otuka, 2000).

3. AFCLIST

The African Forum for Children's Literacy in Science and Technology (AFCLIST) is an informal association of African educators, scientists, technologists, media specialists and international resource persons. It is located in the University of Durban, Westville, South Africa, and implemented jointly with Chancellor College, the University of Malawi. Between 1988 and 1997, AFCLIST was an activity of the Rockefeller Foundation administered from its regional office in Nairobi, Kenya. The Rockefeller Foundation and NORAD are the major donors to AFCLIST.

AFCLIST aims to generate popular understanding in young people in Africa of the practical applications of science, technology and mathematics. It believes that this understanding must be based on interaction between learners and their environment, peers, teachers, other adults in the community and the accepted views of science. It is only through active participation in their learning that young people can develop the confidence and ability to adopt and use ever-increasing science-based technologies that impinge on their lives. AFCLIST further believes that any attempt to popularize science must be sensitive to local educational and cultural practices. Some examples of these practices are discussed as follows:

III. BRIDGING STM WITH THE ENVIRONMENT

Putsoa (1999) states that two factors that adversely affecting the achievement of educational goals for positive socio-economic efforts in Africa are persistent 'dependence mentality' and a false perception about environmental-based curricula. Both factors relate to a need to bridge school science and technology with that in the environment. She describes dependence mentality as the continued use of foreign curricula, particularly in some Anglophone Southern African countries. On environment-based curricula, she cited the school programme aimed to promote self-reliance among youth. It required learners to participate in the production of their basic needs, but to date no significant progress has been made in spite of the ratification of the programme by African Heads of State as far back as 1976. She regretted that, since the 1960s, continental initiatives have tried to seek ways of linking the environment to school science in ways that impact on local technologies. But very little has been achieved.

She suggested a reform towards contextualized school science. Contextualized science uses applications of science in the environment as starting points thereby strengthening the relationship of science, technology and mathematics with everyday events. Therefore, contextualization relates to bridge-building between a specific school STM content and the learners' cultural background at home, at play and at the workplace. She provided some examples of context-based science thus:

1. *STAG:* The Science and Technology in Action in Ghana Project is an outcome of recent developments in the policies and practices of science education. It is an innovative project aimed at bridging the gap between the science taught in schools and that practised in industry and other areas of everyday life. Industry helped develop the resource materials, a situation that differs from the usual pattern of curriculum development in that country.
2. *Toys and the museum:* The staff of the National Museum of Kenya are developing an interactive, travelling exhibition of traditional toys and games to increase public awareness of their potential to promote children's science, technology and mathematics learning.
3. *Children's scientific and mathematical problem-solving strategies in Zimbabwe*: An action-research team, consisting of university, curriculum centre and training college staff, worked with primary schoolteachers to investigate how children think about key concepts on the science and mathematics syllabuses. Teaching intervention strategies, teacher education material and support models were then developed.

IV. THE CONCEPT OF LARGE CLASSES

Onwu (1999) asserted that government policy to expand access to education, such as Universal Basic Education (UBE), has radically altered the educational landscape in many countries of sub-Saharan Africa. One consequence of this policy is that large classes have become a permanent feature of our schools. He states that, as class size increases, students' learning, satisfaction and active participation decreases. He admits, however, that some large classes can be as effective as small classes. Workshop participants on large classes at University of Venda, South Africa, 1998, defined a large class as one where the majority of characteristics and conditions present themselves as interrelated and collective constraints that impede meaningful teaching and learning. Many participants reported that one major characteristic of a large class was the inability to ensure adequate provision of learning experiences, such as meeting individual learner's needs or self-activity and inquiry, motivation, discipline, safety and socialization.

Onwu (1999) warns that sub-Saharan Africa must recognize that large and under-resourced classes will be the reality for the foreseeable future and that teachers may accept that they can do nothing constructive in a situation that has been imposed on them.

V. OTHER ISSUES

1. Community-based learning and STM

In the typical mode of formal schooling, adults and youngsters interact within the boundaries of clearly defined roles in which teachers teach and students learn. An alternative format is one in which not only adults teach children but children teach adults as multiple generations work together on a topic of common concern to their community. Evidence of the benefits of an intergenerational, community-based approach in science education is emerging in various parts of the world.

For example: children in eight upper-elementary and lower-secondary schools, under the guidance of their teachers, identified ways of resolving forest-related environmental problems in their local communities. Using this information, students and adults identified a problem needing resolution and then formulated an action plan to address it. Finally, they collaborated to implement and evaluate the effects of their plan. Gallagher and Hogan (2000) report that the collaborative actions of youth and adults in local communities precipitated a cycle of activities that holds promise for long-term improvement of forests, soils and water supplies in the region. But, most importantly, children and adults learned to respect and communicate with one another in ways that were not evident at the outset of the project. Adults also began to give serious thought to environmentally unsound practices that had previously been ignored.

As one of the village leaders put it at the close of a joint meeting of community and school children: 'People from the government have often come to our village to talk to us about our forests and we did not listen. Today, our children and grandchildren came and talked with us and it is time we listen' (Gallagher & Hogan, 2000).

2. Concept maps

Novak, Gowin and Johansen (1983) state that students' construction of knowledge in the laboratory is facilitated when their learning is structured by heuristics, which help them to reflect both on the learning processes and the learning products. Two teaching/learning heuristics that hold great potential for effective inquiry-based laboratory teaching experiences are concept mapping and Vee mapping. The two heuristics emphasize meaningful learning, are suited for use in collaborative activity structures and help students learn how to learn. The technique of concept mapping was designed to represent the relationships between concepts in a graphical way. Meaning is expressed—that is, a proposition is formed—by connecting two concepts with a line and by labelling this line with a linking word. When larger numbers of concepts are connected a map is formed, which ideally represents the content and structure of a student's knowledge framework. Prepared by a group of students, concept maps can be viewed as expressing the meaning shared by such team members.

Concept mapping has been shown to have positive effects on science achievement, to engage students in extended science discourse, to reduce science activity and to be particularly effective with females (Jegede, Alaiyemola & Okebukola, 1990; Okebukola & Jegede, 1988; Wolff-Michael & Roychoudhury, 1993). According to Treagust (1996) concept mapping has been found useful for improving teaching and learning by facilitating meaning and providing a sense of personal control over this activity. Concept maps can be powerful tools for designing, organizing and revising lectures, papers, chapters or curricula. Further concept maps can be used to identify student's misconceptions, to facilitate learning, to challenge and change conceptual understanding and to act as classroom evaluation tools that assess understanding.

3. Information and communications technologies

The development of ICTs has led to a highly connected society (global village) and it now poses challenges to institutional boundaries. In spite of this the Economic Community of West African States (ECOWAS) as a regional economic block is yet to make an impact on education in general and ICTs in particular.

According to Cheng (1999) there are six ways in which ICT can be used in teaching and learning in an educational institution:

- creative application of ICT;
- computer-assisted learning;
- multi-media teaching;
- web-based teaching;
- acquiring information from the web;
- use of computers.

In most African States, only special schools (State or private) might have one or two computers that are connected to the Internet. The computers are used only for word-processing, computer games and illustration of some STM concepts. Lack of electricity makes it almost impossible to use computers in rural areas.

4. The teacher

The most important resource in the classroom is the teacher. A highly motivated and adequately trained teacher can rise above the constraining circumstances of poor material resources and government apathy. There is the need for teacher education to produce self-motivated teachers who will continually seek solutions to problems facing them in the classroom, who will initiate changes to improve their teaching and who will not wait for government or external aid to implement changes (Otuka, 2001).

Bearing in mind the cultural, social and psychological disposition of African children as well as the absence of facilities, STM teachers at the basic level should not

stop at facilitating activities, they should also assume the following roles:

- a decision-maker who decides what and how to teach and for how long;
- a researcher and resource person who updates information in STM, and becomes a lifelong learner who collects useful, interesting and relevant resource materials to enrich his/her pedagogy;
- a curriculum developer who uses this new information to develop teaching and learning activities that interest students;
- a facilitator who helps students learn on their own;
- an assessor and evaluator of students who works with other teachers in a spirit of co-operation;
- in loco parentis, taking the place of the students' real parents;
- a counsellor who assumes responsibility of helping students build their character and helping them to think through their personal problems (AFCLIST, 2000).

5. *Action-research*

It is unrealistic to expect students to have confidence in their own knowledge, skills and judgement if their teachers have been socialized into blind acceptance of the views and decisions of others. It is unrealistic to expect students to recognize the value of collective learning when their teachers have been denied the opportunity to work collaboratively with their teaching colleagues. A fundamental principle underpinning the use of action-research is that nothing should be taken for granted, whether it be goals, content, teaching/learning activities, or assessment and evaluation strategies. Nothing should be accepted simply because it is handed down from the ministry or higher authority. The questions always should be: Does it work? Is there a better way of doing it? Can I assist the learner better? Are the goals realizable?

6. *School attachment for collaborative teaching*

The variables that affect teaching and learning—pupils' behaviour, pupils' background knowledge, readiness for learning, social status, availability of STM products, ICTs—are changing fast in contemporary Africa. Teacher trainers at all levels, including professors and inspectors of STM, should attach themselves to urban and rural schools to obtain first-hand information and experience about these variables. It is my belief that familiarization with the workings of schools in both settings will arm them to guide the students effectively, rather than using old training techniques or untested theories on newly emerging problems (Otuka, 2001).

The last three issues discussed concerned the teacher. It is my thesis that the teacher is the key: a well-trained and motivated teacher will make the difference in coping with any new curriculum.

References and bibliography

African Forum for Children's Literacy in Science and Technology. 2000. *AFCLIST projects newsletter* (Westville, South Africa), no. 1.

Anderson, R.D. 1992. Perspectives on complexity: an essay on curricular reform. *Journal of research in science teaching* (New York, NY), vol. 29, p. 861–77.

Ben-Chaim, D.; Joffe, N.; Zoller, U. 1994. Empowerment of elementary school teachers to implement science curriculum reforms. *School science and mathematics* (Corvallis, OR), vol. 94, p. 356–66.

Cheng, K.M. 1999. Institutional collaboration in higher education: challenges of the information era. *In:* Carr, R., et al, eds. *The Asian distance learner*. Hong Kong, Open University of Hong Kong Press.

Driver, R.; Bell, B. 1986. Students thinking and learning of science: a constructivist review. *School science review* (Hatfield, UK), vol. 67, p. 443–56.

Gallagher, J.; Hogan, K. 2000. Community-based learning and science education. *Journal of research in science teaching* (New York, NY), vol. 37, p. 107–08.

Harlen, W., ed. 1987. *Primary science teacher training for process based learning: report of the workshop held in Barbados*. London, Commonwealth Secretariat/UNESCO.

Jegede, O.J. 1995. Collateral learning and the eco-cultural paradigm in science and mathematics education in Africa. *Studies in science education* (Driffield, UK), vol. 25, p. 97–137.

Jegede, O.J.; Alaiyemola, F.F.; Okebukola, P.A. 1990. The effect of concept mapping on students' anxiety and achievement in science. *Journal of research in science teaching* (New York, NY), vol. 27, p. 951–60.

Lynne, M.D. 1993. Enrichment in the mathematics and science curriculum in the primary grades *School science and mathematics* (Corvallis, OR), vol. 93, p. 1-4.

Matthews, M.R. 1994. *Science teaching: the role of history and philosophy of science*. New York, Routledge.

Naidoo, P.; Savage, M. 1998. *African science and technology education into the new millennium: practice, policy and priorities*. Cape Town, South Africa, The Rustica Press. (AFCLIST Publication.)

Naidoo, P.; Savage, M., eds. 1999. *Using the local resource base to teach science and technology, lesson from Africa*. Westville, South Africa, University of Durban Press. (AFCLIST Publication.)

Novak, J.D.; Gowin, B.D.; Johansen, G.T. 1983. The use of concept mapping and Vee mapping with junior high school students. *Science education* (London), vol. 67, p. 625–45.

Obanya, P., ed. 1995. *The state of education in Africa*. Dakar, UNESCO/BREDA.

Ogunleye, A.O. 1999. *Science education in Nigeria Mushin*. Lagos, Sunshine International Publications.

Okebukola, P.A.; Jegede, O.J. 1988. Cognitive preference and learning mode as determinants of meaningful learning through concept mapping. *Science education*, vol. 72, p. 489–500.

Onwu, G. 1999. Inquiring into the concept of large classes: emerging topologies in an African context. *In:* Naidoo, P.; Savage, M, eds. *Using the local resources base to teach science and technology*. Westville, South Africa, University of Durban. (AFCLIST Publication.)

Otuka, J.O.E. 2000. *The status of science and technology education in Nigeria: a module for the COMET masters programme*. Westville, South Africa, University of Durban.

BEST COPY AVAILABLE

——. 2001. *Science education for all Nigerians in the twenty-first century: implications for Universal Basic Education (UBE) Scheme.* (Paper presented at the Lagos State STAN annual conference.)

Otuka, J.O.E., et al. 1993. Teachers' views on effective primary science in Nigeria schools. *Science education* (London), vol. 4, p. 23–25.

——. 2000. *Think & Do activity-based science for Nigerian primary schools.* Kaduna, Nigeria, Osibina Nigeria Enterprises.

Putsoa, B. 1999. Bridging school science and technology with that of the community and workplace. *In*: Naidoo, P.; Savage, M., eds. *Using the local resource base to teach science and technology.* Westville, South Africa, University of Durban. (AFCLIST Publication.)

Shymansky, J.A.; Kyle, W.K., Jr. 1992. Overview: science curriculum reform. *Journal of research in science teaching* (New York, NY), vol. 29, p. 743–44.

Treagust, D.F.; Duit, R.; Fraser, B.J., eds. 1996. *Improving teaching and learning in science and mathematics.* New York, NY, Teachers College Press.

Welch, W.W. 1981. Inquiry into school science. *In:* Matthews, M., *Science teaching: the role of history and philosophy of science.* London, Routledge.

Whittle, W. et al. 1993. *Innovative ideas and techniques for science educators in Africa.* The Harare Generator, London, International Council of Scientific Unions.

Wolff-Michael, R.; Roychoudhury, A. 1993. Using Vee and concept maps in collaborative setting: elementary education majors construct meaning in physical science courses. *School science and mathematics* (Corvallis, OR), vol. 93, p. 237–44.

Vocational and technical education in Nigeria

R.N. Oranu

I. INTRODUCTION

Vocational and technical education in Nigeria has a chequered history. Given its humble beginnings, this aspect of education was misunderstood by educators in the larger society. Conceptually, educators could hardly differentiate between the terms vocational and technical education, while society had been led to believe that vocational education is for those who are incapable of pursuing academic programmes. Against this background, vocational and technical education has made slow progress from its earliest times to date.

For the purpose of clarity, vocational education is that skill-based programme designed for sub-professional level education and based on a specific vocation. Technical education, on the other hand, facilitates the acquisition of practical and applied skills as well as basic scientific knowledge. The major difference between the two terms is that, whereas vocational education is designed for a particular vocation, technical education does not target any particular vocation but gives general technical knowledge. Thus, while every vocational education programme is technical in nature, not all technical education programmes are vocational. This subtle relationship accounts for the interchangeable use of both terms in academic literature.

If we take Nigeria as an example, vocational education programmes are offered at the technical colleges while the polytechnics offer vocational and some technical education courses at the ordinary national diploma level. As part of the improved fortunes of vocational education, the current National Policy on Education (1998) has accorded a section to it clarifying its objectives with respect to the entire education system. Furthermore, the country's increasing unemployment has helped to highlight the need for vocational education.

II. PROBLEMS OF THE NATIONAL EDUCATION SYSTEM

Despite the best intentions of successive Nigerian governments, vocational and technical education programmes are still fraught with problems, including: administrators' misconception of the nature of vocational education, inadequate political will by the government, deficient educational monitoring and evaluation procedures, poor funding, poor incentives for teachers and a rapid rate of technological changes. I will not expand on these problems, but suffice it to state that the problems have to varying degrees, affected the advancement of vocational and technical education.

1. Problems related to curricula

More specifically, certain problems have related directly to the curricula of vocational and technical education. These problems include among others: inadequate emphasis on pre-vocational subjects at the primary and junior secondary levels, inadequate facilities, shortfall in

recruitment and exodus of teachers, low student morale, poor funding and examination-oriented approaches to curricula implementation.

2. Tentative solutions to the identified problems

It will be misleading to think of any 'quick fix' for these problems. However, attempts will be made to suggest plausible solutions to address them. There should be an organized workshop for administrators at the federal and state ministries of education on the meaning, scope and nature of vocational education programmes. Without this, the mutual suspicion between general and vocational administrators in the ministries that adversely affect vocational education will continue. The mutual suspicion stems from the misconception of general educators on the demands of vocational education. Also of equal importance is improved political goodwill by governments in funding, implementing and sustaining vocational education, especially in the light of the publicized National Poverty Alleviation Programme.

3. Solutions addressing curricular problems

Teaching pre-vocational subjects in the primary and junior secondary schools should be taken more seriously to raise the interest of students for these vocational programmes. All stakeholders, especially those within the private sector, should provide more funds for the purchase of instructional facilities. The Educational Tax Fund should consider vocational education a priority area for funding. There should be less emphasis on certificates/examinations in implementing the curricula content of the various programmes. Acquisition of practical skills should be stressed on the final outcome.

IV. REFORMS

1. The history of Nigerian reforms

The history of reforms adopted in the Nigerian technical education system cannot be discussed without mentioning the examination and regulatory bodies that initiated them. Through their syllabi, the examination bodies have dictated the curriculum content and method of evaluation. In Nigeria, the Royal Society of Arts (RSA) and the City and Guilds of London Institute (CGLI) controlled the craft-level technical education through the conduct of examinations in commercial and technical subjects. These bodies continued to regulate the study of technical subjects, even after the establishment of WAEC (West African Examinations Council) in 1952. It was in 1960 that WAEC started acting as an agent for these bodies.

Among other things, the objectives of RSA and CGLI were to certify students in technical institutions (formerly trade centres, trade schools). However, only the theoretical aspects were examined by CGLI in most of the trades. By the external regulation of what was taught in the technical institutions, the curricula were not structured to meet specific national development needs. Furthermore, the trainees were given scanty or no general education to supplement their chosen trades.

In December 1972, WAEC took over the conduct of examinations in some technical and commercial subjects from RSA and CGLI. Within this structure, the federal government approved that the CGLI be supplemented with a qualification known as the Federal Craft Certificate (FCC) issued by the technical colleges. The Federal Craft Certificate incorporated practical aspects of the trades examined by CGLI. After the take-over by WAEC in 1978, it introduced practical sessions into its examinations. Even so, WAEC did not introduce more general education into the curriculum of these trades offered in the technical colleges. Thus, the graduates of these colleges were unable to secure admission in tertiary institutions. For this reason, the image of technical education remained tarnished as a programme for academically weak students.

The National Council on Education in 1985 approved the national curricula and module specifications evolved by the National Board for Technical Education for the National Technical/Commercial Studies certificate programmes in technical colleges. The main features of the reform include:

1. General education courses in English language and communication, mathematics, integrated physical science and social studies became mandatory components of the technical curriculum;
2. Industrial staff and itinerant mechanics can be enrolled at the technical college to take specific trade modules relevant to their needs;
3. Trade theory and practice are integrated.

Trade theory now included trade calculation and trade science; no separate classes were held. The 1985 reform was replaced by the restructuring carried out by the National Business and Technical Examination Board (NABTEB) and was introduced in 1995.

2. Basic characteristics of the current reforms

The current reform took effect in 1995 following the establishment of NABTEB in 1992. NABTEB was charged with the conduct of technical and business examinations hitherto conducted (in Nigeria) by the RSA, CGLI and WAEC. The NABTEB based its examinations on two parallel syllabi—NBTE modular curriculum and modified WAEC syllabi. The Board offers examinations in four trade areas: engineering trades, construction trades, miscellaneous trades and business studies (see Annex to this article).

The key objectives of NABTEB include, among other things, making their certificate equivalent to a senior secondary school certificate. The Board also strove to ensure that graduates of the technical college could obtain admission into relevant tertiary institutions (poly-

technics and universities). This was in response to the low esteem accorded to the graduates of technical colleges who could not secure admission into higher institution with the previous technical certificates because of the inadequate content of their general education. To this end, all general education subjects are made compulsory to all candidates and related trade subjects are chosen according to trades. The basic sciences were introduced as trade-related subjects. Practical aspects of every trade were emphasized and made part of the examinations.

In order to sustain the reform, the Joint Admission and Matriculations Board (JAMB) accepted the NTC and NBC certificates as being adequate for admission into institutions of higher learning. Furthermore, all technical colleges were required to affiliate with NABTEB for their examinations. NABTEB also embarks on accreditation exercises before a technical college is approved as an examination centre. The teaching language remained English, which has also been made a core aspect of the curriculum. The sciences were also made a core aspect of the curriculum.

The policy concerning textbooks is not obviously different from that obtainable in the whole education system. Since there is paucity of relevant textbooks, individual colleges are at liberty to recommend books that their students could purchase in the local markets. For this reason, there are no expressed policies on titles, how the texts are written or printed. Furthermore, individual technical colleges relate to the state ministry of education. Any other relationship with local or municipal governments is not usually administrative.

3. Analysis of the text of the current reform

To the extent that technical college graduates can now obtain admission into higher education institutions, the objectives have been achieved. However, most colleges are having problems in striking a good balance between the theory and practice of their trades. This sometimes results in graduates being weak in their practice. The emphasis on general and trade-related subjects vis-à-vis admission into higher education institutions made students concentrate less on the core skills of their trade, which usually require more time to acquire. In terms of strength, technical college students no longer feel inferior to those in the secondary school since they too can aspire to higher education. The emphasis on social studies is also good for general adaptation skills needed by graduates of these colleges.

The difficulties encountered during implementation included: lack of textbooks structured according to the modules; modules (science subjects) structured differently from the already existing standards in higher institutions; and paucity of tools and equipment. On the teaching of language, students' command of English language is quite low to the extent that some teachers employ local languages to communicate with them. As a measure to modify the science module, the subject of physics with chemistry has been separated into two subjects—physics and chemistry. The major action taken to support the reform is in the funding of NABTEB by the federal government. In addition, NABTEB lowered its examination fees to encourage student enrolment.

Indeed, this reform was not imposed by an international funding agency. Rather the reform was informed by the need to improve the image of technical education. Restructuring technical education to reflect the social demands satisfied the expectations of the people. Despite these positive points on the reform, the global demand for modern information technology has not been satisfied in the curricula. Furthermore, the cluster approach and multiple-skills orientation in modern vocational education have been de-emphasized and replaced by the modules.

4. The linkages between curriculum reform and curriculum development

The main objectives of the national policy on education (1998) include building:

1. A free and democratic society;
2. A just and egalitarian society;
3. A united, strong and self-reliant nation;
4. A great and dynamic economy;
5. A land of opportunities for all citizens.

The sections on social studies and communication skills in the syllabi were designed to achieve the first three objectives, while the syllabi on trades are aimed at the last two objectives of the national policy on education. If the syllabi were adequately implemented, these objectives would be achievable. However, the paucity of textbooks and inadequate emphasis on practical skills are creating problems in graduating skilled students.

The lecture and project methods are the main teaching/learning strategies employed for implementing the curriculum. In the main, the strategies are content driven and certainly not child-centred. The teachers have to cover the content in order to ensure that students are able to pass the NABTEB examinations. Students are given ample opportunities to participate in the classroom instruction. The traditional method in which teaching reflects each discipline is still in use since the teacher has to concentrate on particular trades or modules.

Curriculum development involved experts from industry, vocational educators from the polytechnics and universities, and ministry officials. An interdisciplinary approach used in the learning process entailed introducing technical students to introductory metalwork, woodwork, engineering drawing and basic electricity, before they specialize in any trade. There are some opportunities for students in business studies. The syllabi claim to be employing process and product evaluation strategies. Their provision for continuous assessment scores in the final grade is adequate. However, the claim on use of criterion-referenced tests cannot be substantiated.

ANNEX: AN OUTLINE OF THE CURRENT CURRICULA

NABTEB has thus taken over the existing WAEC Technical/Business Examinations. Technical and Business Examinations conducted by NABTEB lead to the award of the National Business Certificate (NBC)/National Technical Certificate (NTC). For some time to come these certificate examinations will be based on two parallel syllabi—NBTE Modular Curriculum Syllabi and Modified WAEC Syllabi.

Candidates are required to indicate their choice of examination syllabi. The Board offers examinations in the following four trade areas, based on the indicated syllabi:

1. Engineering trades;
2. Construction trades;
3. Miscellaneous trades;
4. Business studies.

Consequently, eight booklets, two for each of these four areas, have been published. Each also contains general education subjects and trade-related subjects.

The table of contents of each booklet shows where to find the contents of the syllabi on various subjects, be they general education, trade-related or main trade subjects. The following tables are a guide of which booklet contains which trade. The booklets are in two series: 'A'-series for trades with syllabi based on NBTE Modular Curricula; and 'B'-series for trades with syllabi based on Modified WAEC Technical/Business syllabi.

A. TRADES BASED ON NBTE MODULAR CURRICULUM SYLLABI

I. ENGINEERING TRADES BOOKLET

010 Agricultural Equipment and Implements Mechanics' Work.
020 Motor Vehicle Mechanics Work.
030 Auto Electrical Work.
040 Electrical Installation and Maintenance Practice.
050 Fabrication and Welding.
060 Mechanical Engineering Craft Practice.
070 Radio, TV and Electronic Work.
080 Refrigeration and Air-conditioning Practice.
090 Vehicle Body Building.
100 Light Vehicle Body Repair Work.
110 Instrument Mechanics Work.
120 Appliance Maintenance.

II. CONSTRUCTION TRADES BOOKLET

210 Bricklaying, Blocklaying and Concrete Work.
220 Carpentry and Joinery.
230 Furniture making.
240 Machine Woodworking.
250 Painting and Decorating.
260 Plumbing and Pipe Fitting.

III. MISCELLANEOUS TRADE BOOKLET

310 Cosmetology.
320 Men's Garment Making.
330 Ladies Garment Making.
340 Catering Craft Practice.
350 Leather Trades.
360 Printing Craft Practice.
370 Textile Trades.
380 Graphic Arts.

IV. BUSINESS STUDIES BOOKLET

410 Secretarial Studies.
420 Book-keeping.

B. TRADES BASED ON MODIFIED WAEC TECHNICAL AND BUSINESS SYLLABI

I. ENGINEERING TRADES BOOKLET

670 Mechanical Engineering Craft Practice Parts I and II.
680 Refrigeration and Air-conditioning Practice.
690 Welding Craft Practice, Parts I and II.
710 Fabrication Engineering Craft Practice, Parts I and II.
720 Radio, Television and Electronics Servicing.
730 Electrical Installation Work, Courses B and C.
740 Telecommunication Technicians, Part I.
750 Telecommunication Technicians, Part II.
760 Motor Vehicle Mechanics Parts I and II.
770 Vehicle Body Building.
780 Electrical Engineering Practice.

II. CONSTRUCTION TRADES BOOKLET

790 Furniture, Craft and Advanced Craft.
900 Concrete Practice.
910 Carpentry and Joinery, Craft and Advanced Craft.
920 Machine Woodworking, Craft and Advanced Craft.
930 Painters' and Decorators' Work, Craft and Advanced Craft.
930 Machine Woodworking, Craft and Advanced Craft.
940 Concrete Technology and Construction.
980 Blocklaying and Concreting, Craft and Advanced Craft.
990 Plumbing, Craft and Advanced Craft.

III. MISCELLANEOUS TRADES BOOKLET

950 Hotel and Catering – Basic Course.
960 Hotel and Catering – Craft Course.
970 Agricultural Mechanics' Certificate.

IV. BUSINESS STUDIES BOOKLET

510 Business Studies (Ordinary Level).
520 Business Studies (Advanced).

Science and technology teaching confronted with new curricula in Nigeria

R.N. Oranu

The cardinal difference between vocational education and vocational training is the inclusion of science in the curriculum of the former. This enables students of vocational education to understand the technical concepts they study in schools. It is remarkable that the status of science in technical education programmes has improved over the years. Previously, science and calculations were taught as appendages to the technical subjects. Now these science subjects, namely physics, chemistry and biology, are taught as mandatory subjects for the technical subjects. The separation of (in the year 2000) physics from chemistry (previously physics with chemistry) as distinct subjects is a welcome development.

However, the teaching of general education, trade subjects and science subjects to the students has posed a serious challenge to these students. They have to work very hard to meet the demands of each core subject. It has been observed that most state ministries of education do not post qualified science teachers to the technical colleges. Some of the colleges also lack the prerequisite facilities and equipment for the study of these subjects. In addition, students' interests are divided as to what amount of effort is proportionate to studying either the science or trade subjects.

Based on the Chief Examiner's report and experiences of the author, the following are the problems associated with studying individual science subjects:

Physics:

- lack of in-depth knowledge in the content areas;
- inability of students to record observations during experiments;
- inability of students to express themselves well in the English language on scientific concepts;
- lack of equipment and facilities to teach some topics in the curriculum.

Chemistry:

- students fail to understand the basic principles underlying chemistry topics;
- students have the notion that chemistry as a subject must be memorized, thus they are unable to transfer the knowledge of basic concepts learnt in their lower classes;
- students are also weak in written English;
- lack of self-confidence resulting in copying and repeated cancellations in presenting work;
- failure to adhere to the instructions on the question paper.

Biology:

- misinterpretation of the questions;
- inability to recall facts correctly;
- spelling mistakes;
- students are not familiar with drawings made in biology as distinguished from technical drawings.

Against the background of this array of students' problems in studying the science subjects, the following recommendations are made:

1. Special workshops should be organized for science teachers who are posted to the technical colleges.
2. Past question papers should be made available in school libraries to enable students to familiarize themselves with the nature of the examination.
3. Efforts should be intensified to teach English to students to improve their communication skills.
4. Facilities should be provided for students to practice.
5. There should be more efforts at interdisciplinary approaches to relating these sciences to the technical trades.

Strategies for teachers coping with the new curriculum

R.N. Oranu

I. THE NATURE OF THE NEW CURRICULUM

The new curriculum took effect in 1995 following the establishment of the National Business and Technical Examination Board (NABTEB) in 1992. NABTEB adopted the National Board for Technical Education (NBTE) modular curriculum and the modified West African Examinations Council (WAEC) syllabi as its own curriculum.

One of the objectives of the new curriculum is to produce students who have comparable qualification with graduates of the senior secondary school system. It also aims at producing graduates with adequate skill competence to be admitted into tertiary institutions, like the polytechnics and the universities.

Basic sciences taught previously, as general education courses in WAEC technical, became core courses where practical aspects of the trade course are emphasized. The general education courses, such as English and the social sciences, were equally promoted as compulsory courses. These changes were brought about mainly to improve the image of vocational and technical education with the students and with society at large.

The new curriculum is content-driven and examination centred. Teachers' efforts are geared towards covering the content of the curriculum within the approved time frame of the school calendar. Both the teacher and the student work towards ensuring that the examination syllabi are covered.

II. PROBLEMS OF THE NEW CURRICULUM

1. Modular and modified modular delivery approach

With the modular and the modified modular delivery approach of teaching, the new curriculum creates serious problems in the choice of which system is better for successful teaching. This approach creates other problems, such as:

- *Paucity of textbooks.* Textbooks on either the modular or the modified modular approach are non-existent in the market.
- *Quality of teachers.* Teachers available in the schools are not taught with either the modular or modified modular method. The teachers therefore have problems adjusting to the new curriculum.

2. Content-driven and examination-centred curricula

The issue of this item is that the teachers do not have sufficient time to reflect on how the students are benefiting from their teaching. Teachers are more concerned with finishing the content of their work. Students, on the other hand, are interested in passing their examination with little care as to whether they mastered the lessons or not.

3. Medium of instruction

The teachers' medium of instruction is the English language. Students do not always understand the terminology of this teaching language. Therefore, a lot of time is spent by the teacher trying to interpret the English language so that the students can understand it.

4. Paucity of teaching materials (educational technology)

Educational media for teaching the new curriculum are scarce. Supply within the school system is not always available. Teaching is carried out with little or no illustrative materials.

III. STRATEGIES FOR COPING WITH THE NEW CURRICULUM

Teachers wishing to cope with the new curriculum may adopt the following strategies:

1. *Orientation/in-service workshop.* Any of the listed methods should be adopted in helping teachers to understand how to teach with the modular or modified modular teaching. The teacher has been taught using the lecture-project method. Therefore, he/she needs orientation to properly adapt to the system. Presently, they adopt the lecture/project method for teaching.
2. *Textbooks.* The teacher can cope with the paucity of textbooks by being encouraged by the government to write their own material. In Nigeria, most professional publishers look for large markets before accepting manuscripts for publication. Teachers should therefore be encouraged to write. Teachers have written some manuscripts, but were unable to get them published because of the cost. Some of these teachers use their manuscripts to teach, while others get local printers to print the text.
3. *Content-driven curriculum and examination-centred syllabi.* Teachers spend extra hours after school trying to cover the content of the curriculum and to prepare the students for their examination, especially

external examinations. Teachers usually charge fees in order to provide the extra hours of service.

4. *Medium of instruction.* Many teachers resort to the students' native language to drive home their points while teaching. Problems arise when the terminology is not in the native language. In this situation, the teacher tries to explain using even pidgin English.
5. *Improvization of teaching aids.* Most teachers in the field of vocational and technical education need teaching aids to illustrate their lessons. When the aids are not available many dedicated teachers produce these teaching aids themselves. Other teachers use the blackboards to draw and illustrate their lesson.

IV. DEALING WITH OVERCROWDED CLASSES

The rapid increase in student enrolment in primary schools in Nigeria results in a corresponding increase in secondary schools and vocational and technical college enrolments. This results in overcrowded classrooms. Overcrowding is more acute in secondary education than in vocational and technical education. However, the problem is becoming a concern for vocational and technical education, especially where laboratories/workshops that were built for a small student population now must find room for double the amount of students.

1. Causes of overcrowding

The following reasons cause overcrowding in classrooms for vocational and technical education:

1. *Increase in the student population:* The explosion in the student population has resulted from educational policies, e.g. the drive for Universal Primary Education in the 1980s resulted in many more students graduating from primary schools and wanting to enter the secondary/vocational and technical colleges. The result is that classroom space meant for twenty students may be occupied by between twenty-five and thirty students.
2. *Limited tools and equipment:* This phenomenon is peculiar to vocational and technical education and other educational programmes requiring workshops/laboratories. In this case, there are not enough tools and equipment for students in the class, which means that fewer students receive hands-on experience using tools.
3. *Design limitation:* Experience has shown that initial laboratory/workshop designs for vocational and technical education were intended for small-group instruction. The same logic that led to the design of small laboratories also led to the purchase of fewer tools. Consequently, the administration is less inclined to honour requests for increased funding to meet the requirements of increased student enrolment.
4. *Inadequate classrooms:* Vocational and technical education, as the odd-man-out in the traditional education curriculum, is always attended to in last place in terms of space allocation in the school system. For most schools, especially secondary schools, the workshops, laboratories and studios for vocational and technical courses are located in remote buildings where electricity and water may not be available.
5. *Poor planning of timetables:* Poor scheduling has created situations where classes are scheduled in the same room at the same time.

2. Tackling overcrowded classes

I have had the unique opportunity of serving twice as the head of the department for vocational teacher education and also as the Director of the Institute of Education. In these positions I had the responsibility of solving the problem of overcrowding of classes, especially during the Sandwich (long-vacation programme). The following solutions were applied in trying to resolve the problem of overcrowded classes:

1. *Class scheduling:* As laboratories/workshops were designed from the beginning to accommodate small classes, small groups of students are assigned to them, especially for the skill-acquisition courses. For tutorial/theory courses, large class sizes do not pose serious problems. What happens in this situation is that the shorter students are seated in front, and the taller ones sit behind while the theory lecture is taught. Class scheduling poses some problems of: (a) having to hire more teachers; (b) using the same teacher to teach the various classes repeatedly; (c) ensuring that the same knowledge is imparted to the various classes by different teachers; (d) compensating the same teacher who has to perform the same function several times over. These teachers were given monetary incentives.
2. *Facility loaning:* In the university there are programmes whose laboratory/workshop facilities are similar to those used in vocational and technical education. Heads of such units usually accepted requests to share their workshop/laboratory facilities. For vocational and technical education, the various departments in the engineering discipline make their facilities available. The only problem observed is that the original owners would release the facility after they have finished using it. This results in having to use the facility at odd times.
3. *Large-class demonstration:* Usually when laboratory facilities are borrowed from sister departments there is a time limit. A large-class demonstration is therefore organized and executed in the laboratory where all the students will watch the demonstration by the teacher or laboratory technician. After this large-class demonstration, the department resorts to its earlier method of small-group classes using the earlier discussed class scheduling.
4. *Restriction of students seeking admission:* This is a rather painful action to be taken. Situations have aris-

en when students have been refused admission into classes because of the lack of classroom, laboratory/workshop spaces and tools/equipment.

5. *Purchase of tools by students:* As observed earlier, classroom overcrowding may not be due only to the lack of space; it could be due to the limited amount of tools and equipment. Encouraging students to purchase their own cheaper hand tools has been experimented with, but it appears to be unpopular among the students. However, some students buy their own tools but are reluctant to use them during their class laboratory period for fear of other students borrowing/damaging them.

3. Emerging issues in African States and their implications for curriculum development

Sharmila Pillai

This century has seen a steadily more interconnected world, bringing profound changes in socio/political/economic arrangements. In developing regions these changes are often experienced as difficult challenges. According to Bude (1992), the cultures of many nations in Africa are threatened by the rapid development of an international, high-tech culture influenced mainly by Western countries (p. 7).

Educational curricula throughout the African continent need to be examined in terms of how they reflect, integrate and respond to these new global political/socio-economic realities. And yet, while the changes are global, 'the curriculum implications will have to be handled at school and village levels, where teachers, villagers, itinerant teacher educators and Ministry officials [are] involved' (Bude, p. 41). One pressing need is to inform all the stakeholders about how local and domestic affairs are linked to international affairs in an intimate way. Another is to ensure that curricula include a serious study of global and international systems (including political, economic, biological, ecological, sociological, communications, technological and even aesthetic and religious systems).

The outcome of analysing interconnectedness is to find a clearer understanding of our interdependence with others (Bude, p. 26) and developing the implications for educational curricula. The participants in this session noted the global trends in curriculum development, which are as follows:

- inclusion of prescriptions and/or orientations towards the formation of competencies instead of the transmission of information alone;
- the promotion of school autonomy;
- the promotion of interdisciplinary work;
- the promotion of treatment of emerging issues;
- the promotion of use of new technologies;
- the promotion of creative pedagogical practices;
- renewal of the concept of content (concepts + values + procedures).

These trends result in:

- an orientation towards diversity instead of an orientation towards homogeneity, where learning would be different for different children. Children's individual achievement levels would evaluate progress.
- an orientation towards creativity replacing the old search for repetition, where a teacher's professional activity includes the design of innovation that they later use in schools by translating general curriculum policies into classroom practices. This whole process stimulates teachers' professional growth, where 'innovations challenge tradition', according to Bude (p. 145).
- an orientation towards open-learning processes. Sources of learning will not only be provided by textbooks, but by more diverse sources of information, e.g. Internet facilities. This will entail new ways of information acquisition. Thus, curricula must shift their form from subject matter/discipline design to specific competence, technology and social function design.

It was also observed that, for most subject curricula, the emphasis is shifting away from *transmission of knowledge* to the *use of knowledge* to build competencies. Bude (1992) goes on to say that, across subjects at school, the move is to encourage pupil-centred methods and broader contexts. Community needs and problems, which were core to the curriculum, were identified and ways and means of resolving them were identified, thereby creating content of curricula and teaching methods (p. 41).

These changes require teachers to question their traditional subject practices and classroom routines. New teaching technologies require teachers to reflect on the technical basis of their work, which are the pedagogical assumptions of their practices and, according to Bude, these changes challenge teachers' existing practices, (p. 145).

In coping with the new curricula, the seminar afforded all the countries that were represented with an opportunity to suggest changes to or enrichments of their curricula. While these changes have often posed serious challenges to the teacher, nevertheless the 'bottom-up' approach has been mainly favourable for curriculum development. It was also strongly suggested at the seminar that curriculum changes will only succeed if the individual teachers understand what learning is all about and are prepared to reconsider methods of teaching, the role of the children and the nature of the content they are teaching.

Bude also suggests that *what is offered in schools should correspond to the social, political and economic*

situation of the country. Thus, in addition to disciplinary subjects like mathematics, science, geography, history, etc. (p. 36) [...] concepts on some global issues affecting the human race are infused into the curriculum at different levels of education. Some of these global issues include poverty, hunger, disease, HIV/AIDS, overpopulation, gender related injustices, crime, wars, environmental degradation, etc.

It was suggested that, when designing or re-designing curricula, proposed learning interventions and experiences should be well defined and expressed in simple, straightforward language for easy interpretation and implementation. It was also suggested that curricula should be relevant and reflect the dynamism of the larger society.

Ultimately it is the teacher who has an important role to play in implementing the curriculum. However, says Bude, it has been well established that no curriculum succeeds if the classroom teachers do not approach it from the standpoint of *knowledge* and *enthusiasm* (1992, p. 28).

Reference

Bude, U., ed. 1992. *Culture and environment in primary education: the demands of the curriculum and the practice in schools in sub-Saharan Africa*. Bonn, Germany, German Foundation for International Development (DSE).

Emergent curriculum issues: how are the teachers coping?

Ebele J. Maduewesi

I. INTRODUCTION

Some of the emergent curriculum issues can be encapsulated as follows:

- The issue of relevance of the curriculum to the goals, aspirations and needs of the society have remained largely unresolved.
- Curriculum content is continually expanding and becoming overloaded as a result of additions and/or integration of new materials.
- The interests and needs of learners (and of society at large) are changing with the times, forcing the curriculum to adapt changes.
- Curriculum review, revision and adaptation are lagging behind and need to be considered as priorities.
- Integration and infusion of global issues and concerns (such as HIV/AIDS, environmental degradation, drug abuse) into the curriculum continue to pose serious challenges to curriculum developers, as well as to school textbook writers and publishers.
- Large class sizes and overcrowded school timetables pose serious problems to curriculum implementation.
- The possibilities of learning without teachers loom higher in the education system today.
- The quantity and quality of teachers produced over the years has fallen short of national expectations and needs.
- Curriculum assessment and evaluation are bedevilled by massive examination malpractices and fraud, aided by such domestic trauma as drug abuse and cultism in schools.
- Teachers are faced with an ever-growing variety of subject-matter contents, skills, techniques, machinery and equipment, information/communication technologies, etc., for which they are ill-prepared.
- Teachers require help to successfully mediate the new curricula, the new attitude towards learning and the new technologies.
- Strategies are yet to be developed to help teachers cope effectively.

II. THE NIGERIAN SITUATION

Two basic philosophical issues in Nigerian education emphasize integrating the individual so as to become a sound and effective citizen, and providing equal educational opportunities for all citizens at the primary through to secondary and tertiary levels. Since the mid-1960s, the government's commitment to the use of education as a tool for social change and national development began to be manifest. The recommendations from the first National Curriculum Conference of 1969, culminated in the National Policy of Education (NPE) first enunciated in 1977 and revised in 1981 and 1988. The NPE is an embodiment of well-thought-out curricular provisions. Thus, in considering the curricula for schools, attention was paid to other areas of pedagogy that make for efficient and effective education systems. Fafunwa (1991) identifies these areas to include delivery methods, teacher provision in numbers and quality, facilities and instructional materials, evaluation and assessment methods and procedures.

The objective of schooling as a preparation for useful living in society is evident in the NPE, and the curriculum is regarded as an important instrument for achieving this objective. In terms of curriculum content, the fundamental issues of functionality and utilitarianism in our philosophy of education paved the way to many student-centred, activity-based and community-oriented programmes. Ivowi (1997) has essentially summed up the objectives of formal education as follows:

1. basic literacy for functional living in society;
2. basic concepts and principles as a preparation for further studies;
3. essential skills and attitudes as preparation for application of subject matter for development;
4. stimulation and enhancement of creativity.

For these and many more reasons, the curriculum has consistently taken the centre stage in educational discourse, theory and practice. While the age-long curriculum question—what to teach and to whom—still remains with us, new questions, issues and challenges have emerged that have continued to attract the attention of curriculum researchers, developers and implementers. Some of the emergent curricula issues, which will be discussed below are:

- curriculum relevance;
- overloading of content;
- the interests of the learners.
- curriculum revision and adaptation;
- integration/infusion of new material;
- class size and an overcrowded timetable;
- teacher preparation and teacher effectiveness;
- current evaluation/examination system.

The article will also consider the issue of how and whether the teachers are coping, which is the main thrust of this seminar.

II. CURRICULUM ISSUES

The current curricula have been in use since the commencement of the national policy on education. Although the development of curricula for the various levels of education commenced at different times between 1976 and 1985, uniform and nationwide implementation of the curricula did not occur until after 1986. In line with the requirements of the national policy on education, all the school curricula were re-designed to reflect the new thinking at that time. But since the curriculum is a dynamic concept that depicts an intention, a plan, a prescription or idea about what one would like to see happen in the school, it is naturally open to criticism, evaluation, re-evaluation, adaptation, innovation and sometimes outright reform. The natural offshoot of such activities is to consider emergent issues and work out appropriate coping strategies.

1. Curriculum relevance

This term refers to the sensitivity of the curriculum to the values, beliefs, norms, tradition, aesthetics, science and technology, art, religion and customs of the people. In a nutshell, the curriculum must be sensitive to the totality of the way of life of the society for which it was designed. Thus, the contents of curricula of both formal and non-formal education are best evaluated against the backdrop of their relevance to the culture and environment of the people. No education or curriculum can be considered relevant to the development of a people unless it is firmly rooted in the cultural milieu. Although there are various conceptions of curriculum relevance, the dominant view is that, to be relevant, curriculum content must be sensitive to the needs, goals and aspirations of the learners, and must have as its antecedents and context the philosophy of national education, which, in the case of Nigeria, is based on the integration of the individual to be a sound and effective citizen (FRN, 1989, p. 3). The needs of any nation in the present age of scientific and technological advancement, which is further hastened by computer technology and the information superhighway, are best determined through appropriate and relevant pure and applied science curricula, research, teaching and dissemination of existing and new information.

The Commission on the Review of Higher Education in Nigeria (1992), also known as the Longe Commission, has made wide-ranging and important recommendations on what the education system should strive to achieve to be relevant to the goals and aspirations of society. Some highlights of the Longe Report include the following recommendations regarding curricular emphasis:

> The education system should be effectively titled with a bias towards science and technology with a focus on the creation of science and technology at the primary level, absorption of science and technology knowledge and thinking at the secondary level, actualisation of science and technology through design, construction and production at the tertiary level (FRN, 1992, p. 11).

The commission felt that the curriculum for tertiary education should also be relevant to the task of nation-building and national unity, demonstrated by social and industrial harmony, the overall concept of nationhood and a sense of being one's brother's keeper. Courses (i.e. curriculum packages) in humanities, arts and social science are predisposed to social engineering and community mobilization for the common good of the participating entities.

Shortly after the publication of the commission's report, Nigeria was thrown into a deep social/political upheaval with civil disruptions. But even before the upheaval of the early 1990s, the concept of nationhood remained at best very vague to many Nigerians. Even with the coming of democracy, the concepts of nationhood, nation-building and national unity are yet to be grasped by many. Curricular offerings can therefore not be said to be sensitive to national goals and aspirations, but rather to the ethnic ambitions and needs of a few.

In a situation like ours, it is likely that teachers will find the issue of curriculum relevance a difficult notion to comprehend. It would appear that it may be easier to talk about individuals' needs and the interests of learners. And yet national needs must find their place. However, as if to redress this situation, the government has from time to time put in place certain social programmes designed to raise public awareness on national issues that have the potential to bind the nation together. We may cite, for instance, the Mass Mobilization for Social Justice and Economic Reconstruction (MAMSER), set up by the government in the second half of the 1980s to unite the country and promote better understanding, and the National Orientation Programme of the Ministry of Information to help unite the nation for a common and just cause. These programmes and others like them may have helped teachers to cope with the challenges of making the curriculum more relevant to the national goals and needs.

2. *Curriculum content overload*

The issue of an overloaded curriculum frequently crops up these days. Curriculum scholars (Adeniyi, 1999; Ivowi, 1997; Onugha, 1999) believe curricula are overloaded in terms of content and that this is not good for the school system. It is, however, important to remember that the world's population, including Nigerians, must be educated or at least made aware of the global issues that are affecting the human race, such as poverty, hunger, diseases, HIV/AIDS, over-population, gender-related injustices, crime, environmental degradation, displacement of persons from their homes, etc. This is to enable us 'to start running before we get drenched' (to borrow a phrase from Chinua Achebe). Hence, it is necessary to include concepts in the curriculum borrowed from population/family life education, sexuality education, HIV/AIDS education, peace education, gender education, environmental education, etc.

However, since such an infusion, though relevant to the society, has caused content overload, there is a need to strike a balance. It is important to determine at what level(s) these concepts can be infused in the curricula, the scope and depth of infusion and the meaningfulness they convey. Maybe they are relevant in the upper primary and junior secondary levels. Thereafter, further information on them could be gleaned from supplementary texts, journals, magazines, storybooks, science fiction, etc. It has even been suggested that perhaps one school subject, designated as 'General National Studies', would comprise all the various non-school issues. The number of regular subjects to be offered at each level should also be looked into, and if possible the number should be reduced to a manageable size to reflect curricular realities.

As expected, teachers are not coping well with the influx of new materials into the already crowded school timetable. Taking aside the congestion, teachers were not prepared or trained to teach many of the infused elements and the only way teachers can be prepared is to train or retrain them through sensitization seminar/workshops, short courses, etc. This recommendation corresponds with the views and the practice of many agencies, NGOs and international agencies, such as UNDP, UNESCO, UNICEF, the United Nations Development Fund for Women, etc.

3. *The interest of learners*

The National Policy on Education (NPE) stipulates that ability should play a major role in education. Thus the curriculum should be learner-centred and the interests of learners must come into play in the design of the curriculum. Curriculum relevance and the interests of learners are thus intertwined, since the learner is part of the larger society.

Between the twentieth and twenty-first centuries, there have been major shifts from manual labour to mechanized labour. The recent technological advancements, which started at the close of the twentieth century, have turned the world into a global village in which information and communication technologies have transformed former practices and changed the face of the Earth. Thus, in a world that has changed so rapidly and drastically, no curriculum is good enough unless it encapsulates the global mood and trend. With such global change, the interest of learners is bound to change, as well as that of the entire society. Thus, it is important that the curriculum shifts focus from subject matter/discipline design to specific competencies/technology as well as social function designs. Adeniyi (1999) affirms that there are 'emerging needs and a mounting desire to acquire new knowledge, skills and competencies in such areas as computer science and application, banking and finance, information and communication, engineering, medicine', and these needs and desires must be reflected in the curriculum.

The questions that naturally follow are: How well are the teachers prepared to take up these additional responsibilities? Can they really cope with the knowledge and skills explosion? Since this is almost a rhetorical question, and the answer is known, it gives us a head start to make new plans, mapping our new ideas and strategies for training and re-training teachers and other personnel to be able to take up the new challenges.

III. CURRICULUM REVISION AND ADAPTATION

This is another recurring issue in Nigeria's education system. Normal processes of curriculum development requires that a review be undertaken periodically in order for the curriculum content to respond to the dynamic nature of society. Occasionally, the need for a thorough revision may arise. Usually, a revision may take the form of a complete redesign of the curriculum, or an amendment through improving relevant sections by deletion,

addition or replacement. One major factor that informs curriculum revision is feedback from implementation. Such feedback arises from both a formal and an informal setting. There is a rich and growing body of information available relating to implementation of various school curricula and education programmes in Nigeria. Because there are a large number of subjects offered at the different levels of the education system there has always been a great deal of information feedback from implementation.

The school curricula were due for revision in 1992 following the outcome of the National School Curriculum Review Conference of 1991. Following that, a proposal was submitted through the Joint Consultative Committee on Education (JCCE) to the National Council on Education (NCE) that approved it and advised the Federal Ministry of Education to provide funds for the exercise. Unfortunately, owing to other competing projects, this has not been done.

Funding of educational projects often becomes problematic in the face of other competing demands. This is unfortunate given that, during curriculum review and revision, teachers could have had the opportunity of contributing to the making of school curricula, thereby gaining first-hand knowledge about what goes into the making of the curriculum and what is expected of the teachers who are to implement it. Teachers may be able to accept curriculum implementation better if they are involved in its review and revision.

1. Integration/infusion of new materials

As discussed earlier, it is a welcome idea that certain important global and national issues be incorporated into the school curriculum. However, this has serious implications for curriculum planners, textbook writers and publishers. Many educators feel that the bane of implementing innovative, socially oriented, problem-solving curriculum programmes remains the lack of adequate manpower to handle the programmes as well as the lack of textbooks, reference books, journals and magazines to support effective teaching. In the recent past, many of the international agencies in Nigeria were known to be providing technical backstopping for innovative non-formal curricula, but today the situation is different.

For teachers to be able to cope adequately with the teaching of school subjects and materials (concepts, skill, attitudes) infused into them, they require help to successfully mediate the new curricula, the new attitude to learning, and the new technologies to learners. Such help should include training and re-training, adequate provision of curriculum and instructional materials and positive motivation.

IV. TEACHER PREPARATION

This issue is perhaps the uppermost concern of educational planners and administrators. The importance of teachers and teacher education has been clearly underscored in the national policy document, which states that 'no education can rise above the quality of its teacher' (FRN, 1981). Teachers are largely responsible for the translation and implementation of educational policies, curriculum or course offerings, instructional material packages and assessment of learning outcomes at the level of learners. Alongside the instructional leadership role, the teacher exerts a great deal of influence on character formation and the process of socialization of children within the learning environment.

The quantity and quality of teachers produced in Nigeria over the years has fallen far short of national expectations and needs, while inadequate teacher preparation and dwindling enrolment of pre-service teachers remains a big issue in the education system. To some extent, the number of subjects that are taught at every level of our education system determines the number of teachers required in schools. According to Isyaku (1991) 'the number of the colleges of education (fifty-five) in the country and their intakes are inadequate to provide the number of teachers required in the schools. This is truer at the secondary level.'

1. The effects of the situation

In Nigeria, the teaching profession is not a respected and lucrative one. Even some of those who are already professional teachers prefer to join other professions. Worse still, every failed applicant in Nigeria resorts to teaching when unable to find other gainful employment. Just about anybody can teach! The persistent call of teachers and teachers' unions for the establishment by government of a Teachers' Registration Council to assure that only trained and qualified teachers are allowed to practice in Nigeria has not been put into action.

The problems of teachers and teacher education do not end there. One of the biggest challenges facing teachers today lies in coping with an ever-growing class size, a busy school timetable, and the increasing variety of subject-matter contents, skills, techniques, machinery/equipment, information/communication technologies, evaluation procedures, including continuous assessment and public examinations, examination malpractices, not to mention drug abuse and cultism in schools.

If there is any profession that requires public sympathy, understanding and help in Nigeria today, it is the teaching profession. For teachers to cope with the myriad of social, economic and financial constraints, as well as the numerous curricular, pedagogic and psychological problems, both the government and the citizens need to show greater understanding of the plight of teachers—from primary to university level. Compassionate attention needs to be paid to teachers' demands for recognition and respect, for staff development, training and retraining, better conditions of service, remuneration, job mobility and promotion, and a well-articulated, credible and well-funded teacher education programme.

2. *How are the teachers coping?*

It may be appropriate to conclude this paper by making a final reference to the ability and extent of teachers coping with problems and constraints confronting them in the course of performing their duty. Some people may feel that it is not fair to single out teachers as the most vulnerable group in the society today, yet it is a well-known fact that teachers constitute a disadvantaged social group in Nigeria.

In the foregoing sections of this paper, ample reference was made to the ability of teachers to cope with emergent curricular and social issues, as well as to the strategies for teachers to cope with them. What remains to be highlighted is the strategic plan of action for ensuring teachers their rightful place and role in society and for coping effectively with curricular demands and challenges of our times. The following action is suggested:

1. *Recognition and respect* shown for the teaching profession through:
   (a) establishment of a functional and effective Teachers Registration Council (TRC). (Though the TRC has been set up, it does not appear to have become fully functional due to funding problems);
   (b) registration of all trained and qualified teachers;
   (c) accreditation and certification of teachers;
   (d) parity of the teaching profession with other professions, such as law and medicine.
2. *Staff development:* training and re-training of teachers, particularly about new information, knowledge, skills, etc., which hitherto they had not been expected to understand. From one state to another, from one administration to another throughout the country, the report is the same—teachers' knowledge and practices are outdated and must be refreshed and refurbished through training and retraining workshops and seminars.
3. Enacting and implementing favourable conditions of service for teachers through the teachers' salary scale.
4. Adequate funding of education to guarantee adequate infrastructure, school material, supplies and equipment.
5. Ensuring confidence-building measures in the teaching profession, such as certifying and re-certifying teachers periodically after a mandatory period of teaching.

References

Adeniyi, E.O. 1999. The state of the art in curriculum planning and implementation in Nigeria: a working paper. *In:* Adeniyi, E.O., ed. *National Feedback Conference on School Curricula: a report*, p. 67–76. Abuja, NERDC.

Fafunwa, A.B. 1991. We cannot develop through borrowed technology. *Daily Times* (Lagos), 17 May, p. 17.

Federal Republic of Nigeria (FRN). 1981. *National Policy on Education—teacher education section*. Yaba, Lagos, NERDC Press.

——. 1989. *Views and comments of the Federal Government on the report of the Commission on the review of higher education in Nigeria*. Lagos, Federal Directorate of Printing.

Isyaku, K. 1991. Schools curriculum in Nigeria: issues in teacher preparation, *In: National School Curriculum Review Conference Proceedings (FME)*, p. 324–28. Lagos, Macmillan Nigeria Publishers Ltd.

Ivowi, U.M.O. 1991. *Emergent trend in curriculum content structuring*. Abuja, NERDC. (WCCI Region 2 Forum, p. 15–21.)

——. 1997. *Re-designing school curricula in Nigeria*. Abuja, NERDC. (WCCI Region 2 Forum, p. 2–21.)

——. 1999. A new structure for Nigeria school curricula: a keynote address. *In:* Adeniyi, E.O., ed. *National Feedback Conference on School Curricula: a report*, p. 47–57. Abuja, NERDC.

Onugha, D.C. 1999. Report on the Formative Evaluation of National School Curricula. *In:* Adeniyi, E.O., ed. *National Feedback Conference on School Curricula: a report*, p. 80–105. Abuja, NERDC.

PART II:

COUNTRY REPORTS
RAPPORTS NATIONAUX

1. Cap Vert

Ana Cristina Pires Ferreira

Le Cap Vert est un petit pays insulaire et sahélien d'environ 400.000 habitants, où les écoles d'enseignement de base accueillent 90.000 enfants et 3.000 professeurs et les lycées environ 42.000 jeunes et 1.600 professeurs.

I. LES PROBLÈMES DU SYSTÈME ÉDUCATIF

Le système éducatif scolaire englobe les sous-systèmes suivants : le pré-scolaire (deux ans, à partir de l'âge de quatre ans), l'enseignement de base (six ans, à partir de l'âge de six/sept ans) qui est obligatoire, l'enseignement secondaire (six ans, à partir de l'âge de douze/treize ans) général et technique, l'enseignement moyen et l'enseignement supérieur. L'enseignement extra-scolaire intègre l'alphabétisation et la post-alphabétisation.

1. Les problèmes affectant le système en général

Les problèmes majeurs qui ont un impact sur la qualité et l'efficacité du système éducatif se résument à :

- Faible articulation entre les sous-systèmes pré scolaire, enseignements de base et secondaire ;
- Conditions souvent précaires de développement du processus d'apprentissage, surtout dans les écoles rurales (locaux dégradés, absence de professeurs ayant une formation pédagogique, etc.);
- Qualité des apprentissages fondamentaux en deçà du souhaité dans les objectifs à atteindre par niveaux d'études ;
- Explosion d'effectifs dans l'enseignement secondaire, résultat de la « massification » de l'enseignement de base et faible capacité de satisfaire la demande (locaux, équipements et professeurs) ;
- Disparités régionales en termes de qualité de l'enseignement et d'efficacité interne;
- Difficultés de financer le développement du système éducatif, car plus de 90 % du budget de fonctionnement est destiné au payement du salaire des enseignants.

Bien que les curricula misent en œuvre dans l'enseignement de base et secondaire soient récents, car ils n'ont été généralisés respectivement qu'en 1995 et 1999, les difficultés liées aux innovations introduites ne sont pas négligeables.

2. Les problèmes liés aux curricula

Les idées de base des curricula aussi bien de l'enseignement de base que celui du secondaire sont : la promotion de la formation intégrale de l'individu, et la modernisation en intégrant des valeurs universelles et nationales.

Au niveau de l'enseignement de base, les problèmes associés aux curricula sont essentiellement :

- Déphasage entre la réalité linguistique des enfants à l'école et celle de leur vie quotidienne. En effet, l'enseignement se fait en portugais, langue officielle (le Cap Vert est une ancienne colonie portugaise) et la langue nationale des élèves est le créole. Ce contexte de dyglossie est très mal vécu et par les élèves et par les professeurs ;
- Difficulté d'intériorisation de l'objectif de la phase[1] qui est sous-tendue par la pédagogie des rythmes scolaires, chez les enseignants;
- Le déphasage entre les objectifs du système d'évaluation qui se veut sélectif (promotion du succès de l'élève) et la pratique des enseignants qui privilégie la fonction sélective de l'évaluation. En effet, le taux de redoublement à la fin des phases est élevé (par exemple pour la première phase il est de 20 %) ;
- Conditions d'enseignement souvent précaires impliquant une gestion difficile des programmes et leur développement inachevé, affectant le profil (habilités, aptitudes, capacités des élèves) de sortie de l'élève à la fin de la phase. De plus, les difficultés de gestion des programmes sont associées au faible savoir-faire pédagogique des professeurs et de leur maîtrise des techniques d'enseignement du portugais et des mathématiques, et de faire face à la richesse des programmes (sciences intégrées, expressions) dans un cadre de professeur unique par classe et phase.

Au niveau du secondaire, le problème majeur est la gestion difficile des programmes et du système d'évaluation à cause des conditions dans lequel se développe le processus d'apprentissage : effectif pléthorique dans les classes (quarante et maintes fois plus d'élèves); manque de matériel didactique (les manuels scolaires sont, pour la plupart, importés) surtout pour les matières scientifiques et technologiques, programmes qui n'intègrent pas la réalité nationale, déficit de professeurs avec formation pédagogique. De plus, l'articulation avec l'enseignement de base est faible, ce qui accentue les problèmes du profil des élèves.

II. LES SOLUTIONS ET TENTATIVES DE SOLUTIONS

La résolution des problèmes généraux et curriculaires présentés ci-dessus est la préoccupation majeure du Ministère de l'éducation, qui exécute de façon continue de petites corrections aux produits de la réforme. Des ajustements plus profonds pourront être introduits à par-

tir de 2003, lorsque les résultats des études et d'activités évaluatives de la réforme (en cours dans le cadre d'un projet de consolidation et modernisation du système éducatif, financé par la Banque mondiale) seront connus.

1. Les solutions concernant le système éducatif en général

Des efforts ont été consentis pour améliorer les conditions d'enseignement et se traduisent par :

- Mise en œuvre de programmes de formation continue et en cours d'emploi des professeurs aussi bien de l'enseignement de base que du secondaire ;
- Construction de salles de classes et diminution du pourcentage de salles inadéquates de 23,9 % en 1990, à 15 % environ dans l'enseignement de base. Construction de lycées : douze (représente la moitié du total existant actuellement) depuis 1990;
- Autonomie financière et administrative des écoles secondaires ;
- Mise en œuvre de programmes d'appui social (transport scolaire, cantine scolaire) adressés surtout aux élèves les plus démunis de l'enseignement de base;
- Réglementation du pré scolaire visant une meilleure intégration dans le système scolaire.

2. Les solutions visant les problèmes curriculaires

Pour l'enseignement de la langue portugaise, il a été introduit une méthode d'enseignement de cette langue comme langue seconde (par rapport au créole), aussi bien dans l'enseignement de base que dans le secondaire. Néanmoins, les résultats sont mitigés car les manuels scolaires, les programmes ainsi que la formation des professeurs n'ont pas été adaptés à cette réalité-là.

Le renforcement des capacités des formateurs des deux instituts qui forment les professeurs de l'enseignement de base et du secondaire est une mesure qui est en cours et qui vise à améliorer la qualité, la performance dans la formation. Le suivi rapproché de la gestion des programmes, du système d'évaluation et des formations focalisées dans les besoins, sont aussi des moyens de résolution des problèmes curriculaires.

L'introduction aux nouvelles technologies d'information et de communication, surtout au niveau du secondaire, comme support au processus d'apprentissage est un moyen nouveau de dépasser les problèmes liés à la rareté des matériels didactiques.

III. LES RÉFORMES

Au Cap Vert, l'éducation constitue depuis toujours, un secteur prioritaire car elle est un facteur déterminant pour le développement économique, social et culturel.
L'objectif de moderniser et améliorer le système éducatif a été à la base de plusieurs réformes éducatives dont les principaux aspects sont présentés ci-dessous.

1. Historique des réformes à ce jour

Depuis 1975, le gouvernement du Cap Vert a introduit de nombreux changements dans le système éducatif national en cherchant à le rendre plus conforme à la réalité du pays. Il espérait par ce faire d'améliorer la qualification de la main-d'œuvre qui devait aider à reconstruire le pays et être aussi mieux armée pour affronter le marché du travail.

2. Réforme de 1978–87

Les problèmes sont l'inadéquation du système éducatif hérité du colonialisme à la réalité du pays et le besoin d'enseignants qualifiés après le départ de la plupart des portugais.

Les objectifs primordiaux ont été les suivants : *la formation des enseignants; l'expansion du parc scolaire; le renforcement de l'identité nationale.*

La priorité donnée aux deux premiers objectifs implique que l'organisation du système éducatif et son mode de fonctionnement soient préservés pour l'essentiel.

Le troisième objectif, le renforcement de l'identité nationale se traduit, par l'introduction de nouveaux programmes et manuels scolaires dans l'enseignement de base, les changements les plus significatifs portant sur le contenu des programmes d'histoire et de géographie (les adapter à la réalité du Cap Vert).

Une des grandes nouveautés de cette réforme est l'introduction du travail productif à l'école, l'objectif étant de promouvoir le travail comme valeur éducative.
Cette réforme a été partielle car elle visait essentiellement l'enseignement de base et des ses résultats ont traduit plus une amélioration quantitative du système éducatif (augmentation de l'accès) que qualitative.

3. Les caractéristiques de la réforme en vigueur (depuis 1989)

Les principaux problèmes du système éducatif cap-verdien étaient les suivants:

- Manque de ressources humaines, matérielles et financières;
- Inadéquation des curricula à la réalité locale et aux tendances mondiales ;
- Cohérence limitée et rigidité dans l'organisation et fonctionnement du système éducatif aboutissant à un manque d'efficacité;
- Centralisation administrative excessive et participation très réduite des acteurs.

La réforme vise l'éducation pour tous selon les valeurs jugées importantes: démocratie, esprit critique, analytique et créatif. Elle s'ancre dans les traditions culturelles et essaye de relever les défis de la modernisation. La réforme prône une relation plus étroite entre l'école et la communauté locale. Cependant, elle reste un processus centralisé dans lequel l'intervention au niveau de la con-

ception, la prise de décisions de la municipalité et du local est minime.

L'objectif principal est d'améliorer le système éducatif en le rendant plus moderne et efficace. La loi d'orientation du système éducatif (1990) est la référence dans la construction du nouveau système éducatif. C'est la base des principales mesures de mise en œuvre établies: construire les nouveaux plans d'études, programmes et système d'évaluation, créer un nouveau statut et carrière du personnel enseignant; augmenter l'offre; produire les nouveaux modèles de formation enseignante; introduire les nouvelles technologies et renforcer le système de gestion déconcentré et participé.

Le financement de la réforme éducative se fait avec l'appui d'organisations internationales, telles que l'UNESCO, UNICEF, FNUAP, etc., et essentiellement par le biais de projets. Le projet de rénovation et d'expansion de l'enseignement de base, le projet d'éducation de base et de formation (financés par la Banque mondiale, pour une durée de six ans) visaient la mise en place de l'enseignement de base intégré de six ans; l'élaboration de nouveaux programmes, matériels didactiques et système d'évaluation; ainsi que la formation des enseignants.

Le projet de restructuration et d'expansion du système éducatif et éducation II (financé par la BAD), visait l'expansion du parc scolaire, la re-structuration et l'amélioration de la qualité de l'enseignement secondaire.

En ce qui concerne les livres scolaires, la politique est d'édition cap-verdienne (conception nationale et impression à l'extérieur) avec l'aide internationale, pour l'enseignement de base permettant l'acquisition à un prix très bas (un lot de trois livres, langue portugaise, mathématiques et sciences intégrées dont l'élève a besoin coûte environ 4 dollars). Cependant, il n'existe pas encore de capacité nationale installée pour l'édition scolaire. Au niveau du secondaire, seuls les manuels du première cycle – sept-/huitièmes années, sont cap-verdiens, pour les deux autres cycles, la politique est l'importation de manuels portugais (la responsabilité est celle des libraires sous l'orientation du Ministère de l'éducation) qui abordent au moins 50 % des contenus des programmes.

Donc, bien qu'il existe des manuels nouveaux, la politique du livre ne correspond pas aux exigences de la réforme.

4. Analyse de la loi d'orientation du système éducatif (1990)

Cette loi est la référence pour le développement des activités éducatives depuis 1990. Elle intègre les objectives de politique éducative et la structure du système.

Deux objectifs primordiaux constituent les points forts du texte : l'universalisation de l'enseignement de base de six ans et la formation intégrale de l'individu selon des valeurs universelles et nationales, dans un cadre d'éducation permanente pour la vie, de façon à ce qu'il puisse s'épanouir et participer au développement du pays. Ce sont là des objectifs qui s'intègrent dans le cadre mondial d'éducation pour tous et des défis qu'elle implique en termes d'accès, de permanence, de qualité et de satisfaction de besoins éducatifs fondamentaux.

Les efforts d'investissements croissants, pour soutenir la politique d'éducation de base pour tous, patents dans les plans nationaux de développement sont des preuves de renforcement des points forts de la réforme. En effet, le budget de fonctionnement de l'éducation n'a pas cessé d'augmenter (taux moyen annuel de 2,3 %). L'enseignement de base concentre l'aide des partenaires extérieurs qui soutiennent plus de 80 % du budget d'investissement, dans le but de préserver les gains de la réforme en termes d'éducation de qualité pour tous (programmes, manuels, formation des enseignants).

Le point faible du texte de loi se résume au silence par rapport à la problématique de dyglossie existante dans les pays et qui affecte énormément le processus d'apprentissage. En effet, s'il est clair qu'il faut valoriser la langue maternelle, il n'est pas clair comment le faire ni l'articulation avec la langue d'enseignement. Pour dépasser ce problème il a été préconisé l'enseignent du portugais, langue seconde (par rapport au créole). Néanmoins, vu les difficultés rencontrées dans les classes, cela signifie que le problème persiste.

Il est vrai que la mise en œuvre de la loi d'orientation essaye de répondre aux attentes des populations, de prendre en compte le contexte socio-culturel de celles-ci et de suivre les tendances mondiales, notamment en ce qui concerne l'introduction des nouvelles technologies d'information et communication ; mais il est aussi vrai que les dispositions de la réforme sont quelque peu volontaristes car elles sont animées par la volonté de moderniser, mais de façon déphasée de la réalité sociale, culturelle et économique de la population, la question linguistique étant un exemple frappant. En outre, la disproportion entre les objectifs des programmes de rénovation et les capacités réelles en ressources humaines ainsi que la faible participation de la société civile dans les prises de décision de gestion du système éducatif (bien qu'il existe des cadres formels pour le faire) sont des faits révélateurs du caractère volontariste mentionné ci-dessus. Ce caractère s'insère dans un système éducatif qui se veut décentralisé, participatif et de fort partenariat, mais qui continue, de fait, à être très centralisé. C'est dans ce cadre que sévit le développement curriculaire.

5. Articulation entre la réforme des curricula et le développement curriculaire

Les choix des finalités et objectifs des plans d'études, des programmes, des manuels scolaires et guides des professeurs et du système d'évaluation sont concentrés dans la Direction générale de l'enseignement de base et secondaire. Il revient aux niveaux communal et des établissements scolaires l'exécution des choix effectués, avec autonomie restreinte dans la mise en œuvre des méthodes et stratégies d'apprentissage.

Dans ce contexte les difficultés des professeurs sont notoires puisqu'il existe un décalage entre les objectifs de l'éducation repris dans les programmes et les manuels (développer les capacités de communication, de résolution de problèmes ; promouvoir l'épanouissement personnel par le biais du développement de l'autonomie, la responsabilité et de la coopération, de la sensibilité artistique, des qualités physiques ; développer les valeurs de la citoyenneté, de nationalisme et orienter les choix scolaires et de vie) et les pratiques dans la classe.

Le décalage entre les principes du développement curriculaire (flexibilité, promotion de la responsabilité et créativité du professeur dans l'adaptation des activités au contexte local et de la classe) et la pratique d'une certaine rigidité et de résistance aux innovations chez les enseignants est remarquable.

Quelques exemples pour illustrer les problèmes mentionnés ainsi que quelques tentatives de solutions. Les curricula formels privilégient une pédagogie par objectifs et compétences, prônent un processus d'apprentissage centré sur l'élève tandis que la plupart des enseignants mettent en avant une pédagogie des contenus, centré sur l'enseignement. Pour résoudre ces problèmes, des rencontres locales et nationales sont organisées pour l'adaptation des objectifs, la planification conjointe du processus d'apprentissage et des actions de formations continues, ainsi que le suivi de professeurs et observations des cours par des coordonnateurs pédagogiques.

Les curricula formels privilégient une approche interdisciplinaire et une pédagogie active, différenciée tandis que les enseignants, dans leurs pratiques, préfèrent une pédagogie traditionnelle, non différenciée. Ce fait est plus fréquent dans l'enseignement secondaire où il existe un plus grand nombre de disciplines spécialisées fonctionnant de façon étanche. Au niveau de l'éducation de base il est notoire l'intégration des contenus de façon interdisciplinaire dans un domaine spécifique- sciences intégrées, où la formation pour la vie est le point fort (c'est la discipline avec les meilleures résultats scolaires).

Le portugais, les mathématiques et l'éducation physique sont les trois disciplines piliers de l'enseignement de base et du secondaire mais ce sont les deux premières qui révèlent les résultats d'apprentissage le plus bas. Outre les problèmes des curricula réels présentés ci-dessus qui les affectent, le passage de l'oralité à l'écrit dans le portugais et du concret vers l'abstrait dans les mathématiques sont des aspects d'innovation face auxquels les enseignants ont des difficultés. Ils apportent des questionnements, des besoins qui ouvriront des portes à des innovations et des réformes.

Note

1. Il existe trois phases dans l'enseignement de base: 1e (1e et 2e années) ; 2e (3e et 4e années) ; et 3e (5e et 6e années)

2. Gambia

Fatuo Njie

This text examines the problems facing the national education system in Gambia. By improving the curriculum, introducing local languages and local issues into the curriculum, improving training and focusing on a learner-centred approach to teaching, Gambia hopes to achieve its objective of quality, access and relevance to education.

I. INTRODUCTION

The population of Gambia is estimated at 1.4 million (2002), of whom 58.4% of males and 37.1% of females are considered to be literate. The National Education Policy 1988-2003 and the Master Plan 1988-2006 guide Gambia's education, the main thrust of which is quality, access and relevance. There are encouraging signs that it is working. The gross enrolment rate had increased from 59% in 1991-92 to 79% in the 2000-01 academic year. This means that seventy-nine out of every 100 school-age children are attending school.

II. PROBLEMS AFFECTING THE SCHOOL SYSTEM IN GENERAL

The education system is comprised of three years for lower basic education and three years for upper basic education and a three-year senior secondary programme (making a nine-year basic education programme).

As far as the objectives of the policy are concerned, the problem of access to schooling has almost been solved, as almost 80% of school-age children are in school. The quality is being addressed across the board and some of the measures put in place include the Monitoring of Learning Achievement (MLA) survey and the continuous in-service training of teachers. Relevance is being addressed in the issue of textbooks and the school curriculum.

Gambia's education system faces a number of problems, including the following:

- *Infrastructure/accommodation:* Especially, at the lower basic levels most of the schools are dilapidated

with a lack of furniture, resulting in over-crowded classrooms.

- *Resources:* Pupils share textbooks at the lower basic level. This does not allow them to take books home for tutorials. At the upper basic schools a book rental scheme exists and at the senior secondary school level pupils must buy their own books. Resources for teachers to prepare their own teaching materials are very limited. Most lessons do not contain activities for pupils to do. The government is pumping books into the system but schools are not managing them effectively, despite efforts of a textbook management handbook and a textbook policy to address the issue.
- *Unqualified teachers:* Although teachers are subjected to a selective examination, their lack of training in teaching methods affects the delivery of the subject matter.
- *Overcrowded classes:* This is a major problem affecting schools especially schools in the urban and suburban areas. Although the policy limits class size to forty-five, some classes in the urban schools have between sixty-five and seventy pupils. This affects the quality of teaching and learning.
- *Quality delivery:* A Standards and Quality Assurance Directorate survey shows that private schools are performing better than grant-aided schools and grant-aided schools are performing better than Government schools. This is a real concern for the Education System and the Standard and Quality Assurance Directorate is designing a plan to improve quality education within the system.
- *Lack of adequate supervision in schools:* Lack of adequate supervision by senior teachers in the system due to their full teaching load is hampering the quality of delivery. The infrequency of inspection due to the limited number of inspectors in the field is a concern.
- *Inadequate number of qualified teachers in the system:* There are still a substantial number of unqualified teachers in the system, which is affecting quality. Also about 74% of teachers who are non-Gambians are in the Senior Secondary Schools. The attrition rate for these teachers is high and it is affecting the quality of delivery.

II. CURRICULAR PROBLEMS

New subjects in the curriculum are fighting for space in school timetables and some teachers especially at the lower basic level do not teach according to the timetable. Other problems affecting the curriculum include:

- Lack of training in the new curriculum for teachers. A large percentage of teachers do not have training in the use of the curriculum.
- Gender biases in the curriculum. Most activities in the curriculum and in textbooks are male dominated. This affects the quality of Teaching and Learning.
- Availability of the curriculum in schools. Not all teachers have access to the curriculum especially at the lower basic level. Again, teachers need to be orientated on the use of the curriculum.
- Lack of resources to carry out curricular activities. The lack of resources to carry out activities in the curriculum is a major problem in most schools, leaving most classrooms bare and lessons lacking activities.
- Usage of the syllabus in teaching and learning. Most teachers do not refer to the syllabus in teaching. They simply follow the units in the textbooks. This results in some topics not being taught, as some of the textbooks do not necessarily follow the curriculum. There is a need to use supplementary books for adequate coverage.
- Introduction of thematic and integrated approach in the new curriculum. These new innovations are creating problems of understanding within the system.

IV. TENTATIVE SOLUTIONS TO PROBLEMS

Steps recommended to ease or eliminate problems affecting Gambia's education system involve coping with over-crowding, improving conditions for teachers that encourage co-operation and regular inspections and monitoring and training teachers to serve as supervisors. These measures include:

- *Introduction of the double shift system in schools* in order to: reduce class size and teacher/student ratio thus addressing the issue of over-crowding; aid quality teaching and learning; gain effective use of resources obtain effective assessment of students utilize the expertise of qualified teachers (in two shifts) rather than engaging unqualified teachers.
- *Teacher resource centre.* Establishing teacher resource centres in the six educational regions would aid teachers in the preparation of quality teaching aids using local materials.
- *Establishment of resource rooms in schools.* The establishment of resource rooms in schools where teachers can work together to prepare teaching/learning resources that will be stored for effective use by the whole school.
- *Inspection and supervision of schools.* The inspection and supervision of schools in which weaknesses and strengths are discovered and teachers helped to address weaknesses in school-based workshops.
- *National Training Days for schools.* National Training Days are held twice a term in which issues of concern to teachers are treated in school workshops. The training unit, the inspectorate and the regional offices help in this.
- *Training of senior teachers on supervision.* Senior teachers are trained on monitoring and supervision for the improvement of standards in schools.
- *Awareness about the MLA report.* All stakeholders in education—teachers, parents, and NGOs, etc.—are being sensitised in all the regions on the report of the MLA and the factors that improve learning in a bid to improve quality.

V. REFORMS IN THE EDUCATION SYSTEM

The education system experienced many reforms since independence in 1965. The system of education at the time of independence until 1976 was a 6-7-2 system and a 6-4 system. The former was meant for the high achievers and the latter for the low performers, thus there were academic and vocational curricula.

In 1976, the second education policy 1976-1986 came into force in which the school entry age was changed from 5 to 7. This was done to enable children in the rural areas to attend school. School distances were far and very young children could not walk the long distances. This resulted in some parents not sending their children, especially the girls, to school.

In 1987, a national conference was held in which all stakeholders in education participated in the framework for the policy 1988-2003. The recommendations made at this conference formed the framework of the policy. Therefore one can argue that it was a bottom-up, top-down approach.

In 1988-2003 the third education policy came into force, which produced many reforms:

- The education system was structured to a 6-3-3-4 system, which is gradually being fused into a 9-3-4 system. This is being done to offer every Gambian child nine years of quality basic education. The Primary School Leaving Certificate Examination (PSLCE) at the primary level (end of grade 6) has been phased out in four educational regions. However, many infrastructure and accommodation problems are hindering the phasing out of the PSLCE in regions one and two. Although the policy states that phasing out will be completed in 2003, this might not be possible.
- New subjects have been introduced into the curriculum, including population/ family life education and social and environmental education. An Integrated studies syllabus has also been developed but is not in use yet. It includes science, social and environmental studies, civic education religious education, moral education and gender education.
- The existing syllabi are being overhauled to eliminate gender biases and to make it user friendly.
- The core-subjects at the lower basic are being restructured to identify Learning Achievement Targets. The LAT for grades 3, 4 and 5 are already in place. This instrument spelled out to the teacher the skills and knowledge pupils should acquire at the end of a session.
- The training of all teachers in the system on study techniques to help them with their teaching method is another important factor.
- The introduction of local languages into the school curriculum is underway. The syllabus has been developed but the problem lies in its implementation. Although Gambia is a small country there are area languages and this has implications on the training of teachers. The system advocates the teaching of local languages as a means of communication in the first two to three years and is using English as a subject that is taught.

This reform at the lower basic level has its weakness and strengths. Most teachers are not familiar with the materials and as a result training and sensitisation is ongoing. Adequate resources to carry out the activities will be a problem in some schools.

The major component of the curricular in the third education policy is to improve teacher education as an important contribution to quality education. Many new knowledge areas and activities are now introduced or being introduced in the new school curricula. Besides its pedagogical value, the new school curricular has taken a thematic approach—a multi-disciplinary approach in organizing curricula. It helps students to explore an industry or field in depth while gaining transferable skills that expand their opportunities to do things.

A setback that is envisaged is the lack of resources, i.e., adequate textbooks, teaching/learning aids and adequate knowledge and skills by the teacher.

The new curricula is designed to focus on a learner-centred approach and it is process driven unlike the traditional method, which was dominated by the teacher and what he/she had to say.

The curricular component of the policy at the Gambia College, the main teacher training institution, emphasized child-centred teaching. Thus the new curricula are also focusing on: pair and group activities—learning to listen, to express oneself and to share; learning by doing; and learning and life skills.

Viewing the learner as the centre of the learning experience means that the outcomes listed in the curricula and the subjects listed in the curricula are expressed in terms of what the learner is expected to achieve.

In developing the curricula, headteachers, principals, members of the School of Education Gambia College, inspectors and subject specialist were consulted. The reason for selecting this group of educators was to get them involved in the new material and the teaching methods from the onset.

The major concept of the thematic integrated curricula is collaboration. Theme connections and group work brings about real life situation. The teaching and learning of themes in the new curricula employs a major interdisciplinary approach.

Being a process based curricula, learning is evaluated at the end of every process and also as the process is on going. There is continuous assessment, tests and exams and oral as well as written evaluations.

VI. STRATEGIES FOR TEACHERS

Gambian example illustrates that the curricula is not static. It changes due to the objectives set by the new policy documents to meet the needs of the country. Various strategies have been put in place by all stakeholders

(teachers, teacher trainers, inspectors, etc.) to cope with the new curriculum. These include:

- in-service training of teachers, school-based in-service, on the spot in-service by inspectors and other supervisors, cluster workshops to share experiences and develop new strategies for teaching and learning and the training of teachers in the new curriculum at college level;
- *preparation of teaching and lesson notes;*
- constant evaluation and record-keeping to determine the level of learning;
- developing supplementary materials by teachers association to complement what is missing in the prescribed text;
- the use of supplementary materials;
- the use of the internet to gather facts and knowledge;
- introduction of research at school-base level by school administrations;
- using child-centred approaches, in which the child is encouraged to explore and be independent.

VII. OVERCROWDED CLASSROOMS

Although the policy advocates a class size of forty-five students, public schools, especially in the urban areas, have as many as sixty to sixty-five students per class. Strategies put in place by both government and schools to cope with overcrowding include:

- adoption of the double shift system, allowing teachers to teach a smaller number of pupils at two different times of the day. A survey indicated that the level of learning was equal in both shifts;
- introduction of the double shift also provides for more efficient use of resources such as textbooks;
- group work and child-centred approaches to teaching;
- regular in-service training for teachers in areas of weaknesses and in new teaching techniques;
- incentives to motivate teachers to be more enthusiastic and to boost their moral, such as best teacher awards and the best school award introduced into the system by Gambia Teachers Union in collaboration with the state Department of Education;
- training of teachers at Gambia University and universities abroad on techniques of coping with large class size and other areas, such as management;
- introduction of cluster workshops and national training days in which teachers are trained in areas of weakness and during which they can share their experiences with other teachers;
- supervision of schools by inspectors and training senior teachers and heads/principals to conduct inspection and supervision;
- establishment of resource centres in the regional headquarters and in schools where teachers can learn new technologies in teaching.

3. Ghana

M. Attar

The development of curricular reforms in Ghana is aimed at increasing access to education, improving the quality and efficiency of education—by concentrating on instructional delivery—and ensuring it is cost effective.

I. INTRODUCTION

Curriculum has been the centre of educational reforms aimed at improving instructional delivery. Developing a good curriculum is crucial for any reforms to succeed and meet the targets set for improving the system.

II. PROBLEMS OF THE NATIONAL EDUCATION SYSTEM

1. Problems affecting the school system in general

Funding is one of the main problems affecting the school system. A primary source of funding is the Government of Ghana (GOG). A large percentage of money released to education goes to pay salaries and funds that come from development partners and donors have conditions attached.

The physical condition of the schools is another problem. More schools were opened to fulfil the objective of increasing access to education. This resulted in inadequate infrastructure, which, in turn, created overcrowded classrooms that were not able to absorb the ever-growing population, especially in the urban areas.

2. Problems related to curricula

There exists a disparity in the distribution of teachers: Trained teachers are concentrated in the urban areas to the disadvantaged of the rural schools. Teaching is not likely to be effective because of multi-grade teaching in some rural schools because of lack of teachers, and untrained teachers handling some of these combined classes.

The education system also suffers from ineffective pre-service teacher training. The teacher training colleges have not been effective in producing competent teachers for the basic schools. The trainees have only three months of practical teaching during the three-year course.

Finally, there are not enough textbooks in the system.

III. SOLUTIONS CONCERNING THE EDUCATION SYSTEM

1. Funding

In order to cope with funding shortages, it is recommended that the school system adopt cost-sharing and the establishment of the Ghana Education Trust Fund (GETF).

To overcome inadequate infrastructure and furnishings, district assemblies and school communities would help provide furniture and be responsible for school infrastructure. The Government has a five-year programme to annually provide a set amount to classroom blocks.

Adopting a shift system with each shift having its own set of teachers can alleviate problems with overcrowded classrooms. Schools with infrastructure have double streams.

2. Problems related to the curriculum

District sponsorship of student trainees would help resolve teacher shortages in rural and disadvantaged areas. Students are bonded to serve in the district for at least three years.

A redesigning of pre-service teacher training colleges emphasising methodology would help improve pre-service teacher training. The structure is known as In-In-Out. Trainees stay in the colleges for two years and then participate in a one-year programme during the third year. Trainees are supplied with distance learning materials. They return to the colleges at the end of the year for a few weeks for recapitulation and the final exam.

Teachers' resource centres should be developed to help them access teaching and learning materials and to be involved in the production of curriculum materials. A Textbook Development and Production Policy is being finalized to bring about a more sustainable supply of textbooks to the school.

IV. EDUCATIONAL REFORMS

1. History of reform

In the 1970s, reforms ushered in the Junior Secondary School concept on an experimental basis. There were some major problems and the experiment was not successful. Teachers in all categories left the education system and more than 50% of teachers in primary and middle schools had to be replaced with untrained teachers, leading to a substantial decline in the quality of teaching and learning.

Educational funding was cut and by 1985 it was one-third of the 1976 level. The supply of textbooks and teaching and learning materials virtually ground to a halt and school buildings and furniture had deteriorated as a result of the lack of replacement and repairs.

2. Educational reform of 1987

For the first time, the fundamental structural changes that sought to make the curriculum relevant to the manpower requirements of a developing country like Ghana were introduced. Students were offered five programme options to choose from: general (arts and science options); business (accounting and secretarial options); agriculture; technical, vocational (visual arts and home economics options).

3. Aims and objectives of the reform

The structure of education at the pre-university level changed from seventeen years (6-4-5-2) to twelve years (6-3-3) so that the savings could be ploughed back to expand access to education particularly at the basic and secondary levels.

The reforms also increased access to education, improved the quality, efficiency and relevance of education through the development of a more functional relevant curriculum for basic and secondary education, and increased cost effectiveness, cost sharing and cost recovery in education.

4. Challenges of the Educational Reform Programme

The constraints and problems identified could be summarized into four broad areas:

- poor teaching and learning outcomes;
- inadequate access to education services;
- weak management capacity at all levels of the education system;
- unsatisfactory financing arrangements.

These major constraints, which persisted despite the reforms, are what the Free Compulsory Universal Basic Education (FCUBE) programme sought to address.

5. Characteristics of current reforms

FCUBE was launched in October 1996 and it is being implemented in fulfilment of the Fourth Republican constitutional mandate (Chapter 6 Section 38 Sub-Section 2). The main policy goal of the FCUBE programme is to provide opportunity for every school-age child in Ghana to receive quality basic education by the year 2005. The Ghana Education Service (GES) developed the following three broad implementation objectives to achieve the

FCUBE goal:

- to enhance the quality of teaching and learning;
- to improve the efficiency in the management of the education sector;
- to provide full access to educational services by empowering all partners to participate in the provision of education to all children.

Structures set-up to sustain the FCUBE programme include:

- maintenance of schools by the District Assemblies. By law, the District Assemblies are expected to build, equip and maintain schools.
- cost sharing/recovery scheme under the FCUBE programme. Centres on tuition, textbooks, equipment and tools, stationery, meals and transportation, levies.

6. Strategy to achieve objectives of FCUBE

The GES has developed a comprehensive strategy for implementing the FCUBE programme around three components:

- enhancing the quality of teaching and learning;
- improving efficiency in management;
- increasing access and participation.

All GES implementing units and divisions and other implementing agencies and partners develop their activities and initiatives around these three components and are working to achieve thee broad objectives outlined in the programme:

1. *The teaching languages.* Medium of instruction for the first three years (P1-P3) to be in the predominant Ghanaian language (GL) of the area in which the child lives. English to be taught as a subject. P4-upwards; English as the medium of instructions. Ghanaian language taught as a subject.
2. *The teaching programme/syllabi.* Lower primary: Subjects reduced from nine to five. More periods could be allocated to writing, reading and numeracy skills. Physical education and music and dance provided as physical activities. Upper primary: integrated science and the five lower primary subjects. J.S.S.: Subjects reduced from twelve or thirteen to nine or ten. French is optional. S.S.S.: Subjects arranged into five programmes, four core subjects.
3. *Textbook policy.* Fifteen titles to be produced for basic schools by publishers. Publishers will choose writers for interested titles (70% should be Ghanaians). Five books will be selected for each title.

V. ANALYSIS OF CURRENT REFORMS

1. Strengths and weaknesses

Enhancing quality of teaching and learning:

- The Ministry of Education has put in place a number of interventions under its strategy of Whole School Development (WSD) with support from development partners.
- These interventions have improved teaching and learning activities and access to education among other things.
- Some weaknesses include inadequate teacher commitment, lack of proper supervision and insufficient instructional materials.

Access to education:

- Many schools were opened at both basic and secondary levels.
- Enrolment for both boys and girls increased.
- With the establishment of a girls education unit in 1997, the needs and concerns of the girl-child are being adequately and effectively addressed.
- More children are, however, not attending school.
- Too many schools have been opened without the corresponding increase in teachers and provisions of textbooks and other teaching and learning materials. Because of lack of funds most of these schools have poor infrastructure and other logistics.

Improving efficiency in management:

- Headquarters, regional and district directors, district education oversight committees (DEOCs), accountants, budget officers and internal auditors have all received training to improve their management efficiency.
- Circuit supervisors, training officers, girl-child education officers and other district personnel have also received training to improve their management skills. Head teachers have received training in financial management skills and educational supervision.
- More authority has been devolved to the district directorates to ensure effective management and supervision.
- Financial decentralization has been slow and this has prevented the district education offices from operating effectively and efficiently to meet their set targets.

Problems connected with teaching the language employed in schools:

- The predominant use of English at pre-school level.
- Few teachers are sufficiently trained in the Ghanaian languages to be able to teach them.
- Teachers are sometimes posted to schools in towns and villages where the languages spoken by the pupils differ from their own and they would not have studied that particular Ghanaian language at the training colleges.

The language policy is being implemented differently at rural, metropolitan and urban levels. The policy is over implemented in the rural areas. Some teachers tend to use the mother tongue throughout the teaching in all classes at the basic level. Even English is taught in the local language. As a result, the children's command over English is poor.

VI. LINKING CURRICULUM REFORM AND DEVELOPMENT

In order to achieve the objective of improving teaching and learning in schools, the curriculum was revised. The new curriculum targets high-level cognitive objectives, values and practical skills.

It emphasizes critical and scientific thinking and is aimed at developing the new type of Ghanaian who will become a problem solver in the Ghanaian context and be able to function effectively in society. Rote learning is discouraged.

1. Developing the syllabus

The new syllabus is teacher-friendly. Its development is centred on three broad categories:

- *General aims:* broad outcomes expected to be demonstrated by a group of persons who have gone through a specific educational programme.
- *General objectives:* behaviour to be exhibited by persons who have gone through a component or an aspect of a syllabus.
- *Specific objectives:* skills and competencies that learners are expected to achieve after a lesson on a topic/unit in a syllabus.

2. Teaching/learning strategies

The teaching and learning strategies are based on objective-driven curricula. The specific objectives in the syllabi are pupil-centred, i.e., what the pupil will be able to do after instruction has taken place. Correspondingly, the teaching/learning activities are pupil-centred and involve role-play, group participation, discovery method, debate, brainstorming and discussion.

3. Interdisciplinary approach

An integrated approach is utilized in subject-based curriculum development. Integration is achieved by identifying key issues confronting the society. Some of these issues are: communication, courtesy and etiquette, democracy (human rights), gender issues, health and sanitation, jobs and job training, national disasters, science and technology, environmental degradation. The syllabi adopt vertical and horizontal integration approaches for linking themes and topics within subjects and across subjects, e.g. HIV/AIDS is integrated into religious and moral education, science, English and other subjects.

4. Methods and strategies used to develop the curricula

The stages of the integrated subject-based syllabus development work are as follows:

- draft syllabus writing (using subject-panels);
- try-out of draft syllabi and analysis of try-out data;
- revision of draft syllabus using the data and comments of classroom, teachers and stakeholders.

5. Evaluation strategies

Reforms require periodic monitoring to determine whether they are being implemented and when implemented what effect they are having. A number of methods are used for such monitoring:

- Classroom evaluation.
- The Basic Education Certificate Exam (BECE) conducted at the conclusion of JSS.3.
- Continuous Assessment (CA) conducted by classroom teachers in all subjects for all grades as an internal, formative assessment of individual performance.
- Performance Monitoring Test (PMT), an assessment of school performance introduced in 1998 to provide each district, school and community with measures of student achievement at the school level.
- Criterion Reference Test (CRT) in mathematics and English is administered to 5% of primary 6 pupils nationwide to measure the level of mastery of instruction.
- The Senior Secondary School Certificate Examination (SSSCE) is conducted at the conclusion of SSS.3.

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4. Liberia

J.A.L. Tarlowoh

I. INTRODUCTION

The curriculum for Liberia calls for a review that takes into consideration the reality that presents itself in the country today, for example, child rights, peace education, HIV/AIDS, information sharing, vocational education for all, etc. Financial and logistical support are not available for a fresh curriculum review and revisions, which were last performed in 1996, and which addressed the relevant issues at the time.

We would like to acknowledge our current needs, but we must first catch up with the gap created during the civil war years. Once that is accomplished, we can then strive to cope with the present and seek globalization.

I. EMERGING ISSUES

The emerging issues shown in Table 1 were highlighted by the Liberian delegation, calling for cost-effectiveness and extreme time efficiency. Other possible emerging issues worth highlighting include: female genital mutilation, school feeding/child nutrition, monitoring learning achievement for the new curriculum design and teacher-training and cost-effective/alternative teacher-training methods.

II. TEACHERS COPING WITH NEW CURRICULA

The Liberian education system is currently in a transition phase from a highly centralized to one with devolution of management and authority. Provisions have been mapped out in a 10-year development plan that is currently before the legislature for ratification.

The following table is a general description of problems affecting the Liberian education system, what effects the problems have on the classroom and society and on teaching and learning, and possible solutions.

TABLE 1. Emerging issues in curricular application

ISSUES	MANIFESTATIONS IN SCHOOLS/SOCIETY	TRADITIONAL CURRICULUM	LEVEL	RECOMMENDED AREAS/MATERIALS	INSTRUCTIONAL METHODS	MODE OF EVALUATION
1. Child's right	▪ Student discipline ▪ Corporal punishment ▪ Intolerance between and among students ▪ Child abuse	▪ Social studies ▪ Language arts ▪ Life-skills	Gr. 1-9	▪ Child development psychology ▪ Convention on the rights of the child ▪ Socio-ethics ▪ Gender parity	▪ Role-play ▪ Book research ▪ Case studies ▪ Group projects ▪ Focus-group discussion	Continuous assessment
2. Peace/global intercultural education	▪ Terrorism ▪ Discrimination ▪ Poor conflict-resolution practices ▪ Math	▪ Math ▪ Science ▪ Social ▪ Language arts ▪ Life-skills	Gr. 1-12	▪ Conflict-resolution strategies ▪ Religious tolerance ▪ Civic education	▪ The internet ▪ Distance education ▪ Non-formal teaching styles	Continuous assessment
3. Basic Education For All	▪ Rebel activities ▪ Street peddling ▪ Street children ▪ Teenage pregnancy ▪ Unwanted pregnancy	▪ Math ▪ Science ▪ Social studies ▪ Language arts	Gr. 1-9 ▪ Adult literacy	▪ Literacy ▪ Numeracy ▪ Life-skills	▪ Formal and non-formal teaching styles	Continuous assessment and other traditional evaluation techniques
4. HIV/AIDS	▪ Increasing number of AIDS victims ▪ Loss of jobs and families	▪ Social studies ▪ Language arts ▪ Math ▪ Life-skills ▪ Science	Gr. 3-12 ▪ Post Secondary ▪ Tertiary	▪ Meaning of AIDS ▪ Causes of AIDS ▪ Modes of transmission ▪ Prevention	▪ Formal and non-formal teaching methods	Traditional evaluation techniques
5. Information sharing	▪ Lack/scarcity of resources materials ▪ Under-usage of internet information ▪ Negative use of information (terrorism, chemical warfare, etc.)	▪ Social studies ▪ Language arts ▪ Maths ▪ Life-skills ▪ Science	Gr. 3-12 Post-secondary/ tertiary	▪ Computer software ▪ Computer programmes for individual subjects ▪ Internet access	▪ Formal and practical Methods	Formal and practical evaluation techniques
6.Vocational/ technical Education For All	Increase emergency of application of vocational technical instruments/ equipment	▪ Science ▪ Life-skills ▪ Vocational Technical programme ▪ Elective	Gr. 4-12 Post-secondary/ tertiary	Basic operation of life-skills instrument/ -equipment ▪ Practical training in selected trades	Formal and practical methods	Formal and practical evaluation techniques

TABLE 2. Problems facing the Liberian education system.

EXISTING PROBLEM	MANIFESTATIONS IN CLASSROOM/SOCIETY	IMPLICATIONS FOR TEACHING/LEARNING	ATTEMPTED SOLUTIONS
A. GENERAL i) Inadequate institutional supervision	a) Low teacher output	▪ Loss of instructional time ▪ Inadequate lesson preparation ▪ Deteriorated teacher/student relationship ▪ Unsatisfactory relationship with school authorities	▪ Series of workshops local and international NGOs ▪ Legislative enactment to accredit teachers ▪ Ad-hoc school visits by MOE officials
	b) Under-achieving student performance	▪ Omission of some pre-requisites to learning ▪ Practice of cheating during examination ▪ Little competition among students	▪ Series of local and inter-school quiz competitions ▪ Competitive activities/special projects by school clubs and similar entities ▪ Accreditation of school by MOE on basis of academic performance
	c) Under-utilization of instructional materials	▪ Promotion of teaching by rote method ▪ Little critical thinking taught/learned ▪ Low demonstration of originality of thought and self-expression	▪ Proliferation of teacher-made pamphlets in schools ▪ Implementation of community science laboratories ▪ Implementation of community libraries ▪ Development of supplementary instructional materials by local experts and NGOs
ii) Low financial support	a) Inadequate accessibility of educational facilities to accommodate school-age population	▪ Slow pace in achieving Education for All	▪ Multiple-shift system being used to maximize available space/facilities—last shift is 8 p.m. ▪ Commercialization of education by non-educationists.
	b) Little provision for special education	▪ Discrimination leading to non-achievement of education for all	▪ Involvement of a few NGOs in the education of some special groups
	c) Overcrowded classrooms	▪ Insufficient teaching/learning	▪ Study classes organized by able parents/sponsors
	d) Insufficient teacher-training facilities/opportunities	▪ Mediocre teaching/learning achievement	▪ In-service/short-term teacher-orientation workshops

			▪ Accelerated teacher-training programmes ▪ Teacher-training effort by someNGOs
	e) Non-availability of relevant textbooks and other instructional supplies	▪ Limited exposure to a variety of learning experiences ▪ Poor mastery of materials taught	▪ Book donations
iii) Brain-drain from the Education Sector	a) A lot of untrained and unqualified teachers in the system	Mediocre teaching/learning	▪ Study carried out on teacher accreditation and compensation submitted to the Government
	b) Skilful teachers are scarce	Mediocre teaching/learning	▪ Civil servants are now authorized to teach alongside their official duties
	c) The value of education is diminished among students	▪ More energy needed to motivate students	▪ Government encourages sponsorship of in-service teachers
iv) Wide generation gap	a) Established psychological theories can hardly explain properly the many absurd behaviours of today's students	▪ Low level of self-fulfilment in students	▪ Students representatives are included at planning sector review meetings at national level
B.CURRICULAR i) Under-development of the curriculum	a) Flexible operational curriculum design by schools	▪ Non-uniform school schedule ▪ Results in wide range of ability in students of the same level	▪ Terminal/national examinations are conducted by an independent body (WAEC)
	b) Curriculum revision irregularly spaced	▪ Curriculum fails to meet the emerging needs of society ▪ A problem to cope with regional/global standards	▪ Recent addition to national curriculum by UNFPA
ii) Orientation for the effective implementation of the curriculum	a) Teaching from textbooks and not the curriculum	▪ Coverage of many irrelevant materials ▪ Neglect of targeted out-come ▪ Lesson plans are frequently teacher oriented	▪ Series of workshop by local and international NGOs ▪ School workshops/ orientations
	b) Teaching of the examination syllabus and not the curriculum	▪ Neglect of necessary out-comes/objectives ▪ Successful graduates have low level of education	Advocacy for list of list of competencies per class as criteria for promotion
iii) Incomplete practical evaluation	a) Different application of the continuous assessment method	▪ Varied interpretations of school grades ▪ Most grades presented have little predictive/discriminatory value	▪ None for now

5. Mali

Abou Diarra

I. HISTORIQUE DE L'ÉLABORATION DES PROGRAMMES D'ENSEIGNEMENT

1. Avant la réforme de l'éducation de 1962

Pendant la période coloniale, les programmes et les manuels scolaires étaient inspirés des préoccupations politiques, économiques et culturelles de la métropole.

2. La réforme de l'éducation de 1962 :

Au lendemain de la succession du Mali à la souveraineté nationale et internationale, la volonté manifeste des Autorités était d'affirmer l'homme malien et africain avec ses préoccupations politiques, économiques et culturelles, d'où la réforme de l'éducation en 1962.
Les programmes devraient être basés sur les principes fondamentaux suivants :

- Lier l'école à la vie ;
- Centrer l'éducation sur les réalités socioculturelles de l'apprenant et ses aptitudes ;
- Fournir une éducation équitable pour tous ;
- Lier la théorie à la pratique.

3. Le contexte actuel et la problématique des programmes d'enseignement :

La société malienne est marquée par de nombreux problèmes d'ordre économique, social et politique parmi lesquels une école chroniquement malade se traduisant par

- Une faible qualité de l'éducation ;
- Un manque de formation du personnel d'enseignement et d'encadrement ;
- Des effectifs pléthoriques dans les classes ;
- La baisse des niveaux et le taux élevé d'échecs scolaires ;
- L'inadaptation des programmes d'enseignement se traduisant par une incapacité de ses produits à s'insérer dans la vie active, etc. ;

A la faveur des évènements de mars 1991, le Mali a opté pour l'édification d'une société démocratique pluraliste fondée sur l'équité et la tolérance. Cela a conduit à un examen sans complaisance du système éducatif dans ses nouvelles finalités, ses objectifs, ses contenus et méthodes d'enseignement.

II. PROCESSUS D'ÉLABORATION DES PROGRAMMES D'ENSEIGNEMENT

Le processus d'élaboration des programmes d'enseignement passait par trois grandes étapes, à savoir: l'élaboration des avant-projets de programmes, l'élaboration proprement dite des programmes d'enseignement et l'officialisation des programmes d'enseignement.
L'élaboration des avant-projets de programmes se réalisait selon le processus ci-après :

- Identification des besoins de formation et propositions d'amendement des programmes par les comités pédagogiques des établissements d'enseignement scolaire et des circonscriptions d'inspections d'enseignement fondamental;
- Élaboration des avant-projets de programmes par une commission nationale sous l'égide de l'Institut pédagogique national (IPN);
- Élaboration des projets de programmes à travers un séminaire regroupant des maîtres expérimentés, des spécialistes des disciplines, des conseillers pédagogiques, des inspecteurs d'enseignement fondamental et des formateurs de l'IPN;
- Soumission des projets de programmes à l'approbation du ou des ministres en charge de l'éducation;
- Officialisation des programmes d'enseignement après approbation des Hautes autorités de l'éducation.

III. LES LIMITES DES PROGRAMMES ACTUELS

- Programmes très ambitieux par rapport aux aptitudes des élèves d'une part et du temps imparti d'autre part;
- Programmes comportant des objectifs de savoir, savoir faire et savoir être, peu explicites;
- Programmes de syllabus qui sont le plus souvent la reproduction des tables de matières de certains manuels scolaires;
- Programmes avec un volume horaire très élevé par rapport aux normes sous-régionales;
- Manque de cohérence entre les programmes de différents ordres et types d'enseignement (enseignement fondamental, enseignement normal, etc...);
- Manque de cohérence entre les programmes d'enseignement et le marché de l'emploi;
- Inadaptation des manuels utilisés pour la mise en oeuvre des programmes d'enseignement;
- Manque de qualification des personnels chargés de l'élaboration, de la mise en oeuvre et de l'évaluation des programmes.

Quelques tentatives d'amélioration des programmes et de la qualité de l'éducation ont été menées à travers certaines expérimentations et innovations pédagogiques: ruralisation, enseignement télévisuel, blocs scientifiques, éducation pour la santé à l'école, éducation pour la vie familiale et en matière de population (EVF/EMP), éducation environnementale, pédagogie convergente de l'enseigne-

ment des langues maternelles concomitamment avec le français, traduction des programmes d'enseignement en objectifs pédagogiques opérationnels, (OPO), etc.

IV. PERSPECTIVES D'UNE APPROCHE CURRICULAIRE

1. Option fondamentale

Le Mali a opté pour une réforme de son système éducatif à travers l'élaboration et la mise en œuvre du Programme décennal de développement de l'éducation (PRODEC). Cette réforme consiste à repenser profondément le système éducatif dans son ensemble et sur de nouvelles bases (finalités, objectifs, contenus, stratégies) dans une démarche globale et systémique.

Le Mali a choisi la réforme des curricula comme la porte d'entrée pour la refondation de son système éducatif.

Le curriculum se base sur les choix politiques, les orientations philosophiques, la demande socio-économique, les attentes socioculturelles et définit les profils de compétence, les objectifs, les contenus, les méthodes pédagogiques, le matériel didactique, les modes d'évaluation et la formation.

Des enseignements/apprentissages centrés sur les apprenants et sur le développement de leurs compétences sont au cœur du nouveau curriculum malien. Les compétences sont de trois ordres :

- Des compétences disciplinaires;
- Des compétences transversales;
- Des compétences de vie.

Le Mali a opté pour une démarche participative à toutes les phases d'élaboration et de mise en œuvre du curriculum à travers une forte implication de tous les acteurs, partenaires de l'école (la société civile, les enseignants, les syndicats, les élèves, les parents d'élèves, les chercheurs, le secteur privé, les collectivités locales, les employeurs, les ministères concernés, etc.)

Les enseignants constituent des acteurs clés dans le processus d'élaboration et d'implantation du nouveau curriculum malien. Pour ce faire les enseignants, les syndicats d'enseignants et les parents d'élèves ont été associés à toutes les phases, depuis l'étape de redéfinition et de l'adoption de la nouvelle politique éducative, en passant par les différentes sessions de formation, d'information et de communication sur le PRODEC et la rédaction du curriculum. Ils seront intimement impliqués dans l'expérimentation et dans l'implantation du nouveau curriculum.

La réalisation de la réforme du système éducatif malien a consisté dans une première étape, en sa traduction dans la loi n°99-046 du 29 décembre 1999 portant le nom de loi d'orientation sur l'éducation.

2. Processus de développement des curricula

Le Programme décennal de développement de l'éducation a inscrit comme priorité la planification et le développement des curricula avec une entrée par les compétences. Pièce maîtresse de la réforme du système éducatif malien, les curricula détermineront la validité des programmes d'études, la formation des enseignants, les méthodes pédagogiques, les instruments et modalités d'évaluation ainsi que des éléments relatifs aux manuels et autres supports pédagogiques.

Un processus de développement des curricula a été entamé par le Ministère de l'éducation à travers le Centre national de l'éducation avec l'appui des différents partenaires techniques et financiers. A ce jour, ce processus a conduit à :

- L'élaboration et l'adoption du cadre général d'orientation du curriculum de l'enseignement fondamental;
- La formation au cours de plusieurs sessions, de rédacteurs et animateurs du curriculum (directeurs d'académie, directeurs de CAP, agents des services centraux, conseillers pédagogiques, directeurs d'écoles, enseignants, syndicats, ONG);
- L'élaboration de guides pour la production du curriculum de l'enseignement fondamental;
- L'appropriation aux cours d'ateliers régionaux des documents techniques appuyant la production du curriculum de l'enseignement fondamental.

Toutes ces activités ont outillé les acteurs en vue de la rédaction du curriculum du niveau 1 de l'enseignement fondamental et la planification de sa mise à l'essai.

Suite aux activités ci-dessus citées, des ateliers de rédaction des éléments du tronc commun et ceux des spécificités régionales ont permis la production d'un référentiel qui, présentement, sert à finaliser les unités d'apprentissage et le guide du maître.

3. Cadre logique du curriculum de l'enseignement fondamental

Compétence disciplines	Compétence transvisuelle	Compétence de vie	Objectifs d'apprentissage	Indications méthodes			Évaluation sommative
			Contenu réalisations	Responsabilité éducation	Evaluation formation	Appui	

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Le développement du curriculum se fait selon une approche participative. C'est ainsi qu'au niveau institutionnel, il est créé une unité centrale de développement des curricula et ses démembrements aux niveaux régional et sub-régional. Toutes les couches socioprofessionnelles sont partie prenante dans le processus devant conduire à l'élaboration du nouveau curriculum et précisément pour la formulation des compétences à faire acquérir aux apprenants.

4. *Stratégie de mise à l'essai et d'implantation du curriculum*

La stratégie de développement du curriculum prévoit, dans le cadre de la mise à l'essai et de l'implantation, entre autres, les actions suivantes :

En direction des enseignants

Il n'est un secret pour personne que les enseignants sont très conservateurs face aux innovations pédagogiques, du moins ils mettent du temps à se départir de leurs vieilles habitudes de pratique de classe. C'est pour cela que la réforme des curricula a, avant toute chose, débuté par

- De larges concertations avec les enseignants, directeurs d'écoles, conseillers pédagogiques, directeurs des centres d'animation pédagogiques, directeurs d'académie d'enseignement, syndicats d'enseignants, associations de parents d'élèves, ONG et associations œuvrant dans le secteur de l'éducation. Ces concertations ont visé à amener ces acteurs incontournables à faire le diagnostic des insuffisances des programmes d'enseignement, méthodes et techniques d'enseignement, procédés d'évaluation, et partant, à proposer des remèdes;
- Cette sensibilisation s'est poursuivie avec la participation de ces partenaires aux différents ateliers de formation et d'information sur l'approche. Il est important d'ajouter qu'une large campagne de sensibilisation a été menée sur les ondes des radios, de la télévision nationale et dans la presse écrite parallèlement aux ateliers régionaux de formation.

En prévision de la mise à l'essai et de l'implantation, un vaste programme de formation, de suivi et d'appui pédagogique est en programmation afin de faciliter le passage de l'approche programme à l'approche curriculum.

En direction des parents d'élèves

Il est attendu des parents d'élèves, des communautés et des employeurs une validation sociale du nouveau curriculum, suite à des enquêtes sociales ayant concerné toutes les couches socioprofessionnelles de toutes les régions géographiques, culturelles et linguistiques du pays. Les préoccupations et les besoins ont été recueillis puis traduits en compétences, objectifs pédagogiques et activités d'apprentissage dans le curriculum. Il s'agira pour les parents d'élèves, de porter un jugement à posteriori sur les acquisitions des élèves avec items, la satisfaction de leur desiderata.

Pour ce faire, une campagne d'information et de formation de proximité sera mise en œuvre par chaque académie d'enseignement et par chaque centre d'animation pédagogique, tant en langues nationales qu'en français. Pour réussir sa réforme des curricula, le Mali souhaite un accompagnement scientifique, technique et financier pour:

- La recherche des meilleures stratégies pour l'implication plus poussée de tous les acteurs et partenaires de l'école à toutes les étapes de développement des curricula;
- L'approfondissement des questions relatives à la décentralisation et à la prise en charge des besoins régionaux et locaux dans les curricula;
- La réalisation de partenariats avec les autres pays (à commencer par les pays de la sous-région) à travers des échanges à distance, des voyages d'études, des ateliers sous-régionaux, des projets communs, etc.
- Les appuis internationaux, la mise en place de partenariats avec des institutions spécialisées.

6. Niger

S. Aboubacar

À son indépendance en 1960, le Niger était l'un des pays africains les moins scolarisés. Les choix des responsables politiques de l'époque en matière d'éducation étaient déterminés par la nécessité d'une expansion rapide de l'école héritée de la colonisation. Cette politique des effectifs a toujours occupé une place importante dans les politiques éducatives mises en œuvre depuis les années 1960. Le système éducatif nigérien comprend actuellement deux sous-systèmes :

- *L'éducation formelle* composée du préscolaire, l'enseignement de base 1 ; l'enseignement de base 2 ; l'enseignement moyen et l'enseignement supérieur.

L'enseignement préscolaire ne représente que 1 % des enfants préscolarisables (3 à 5 ans) et demeure l'apanage des centres urbains.

L'enseignement de base 1 (enseignement primaire) comprend les écoles classiques, les écoles franco-arabes, les écoles expérimentales et les écoles spécialisées. En l'an 2000 l'enseignement primaire comptait 4 112 établissements publics et privés ; 579 488 élèves répartis dans 13 460 classes et encadrés par 14 849 enseignants.

L'enseignement de base 2 (premier cycle du secondaire) accueille par voie de concours d'entrée en sixième des élèves âgés de 11 à 13 ans pour un cycle d'une durée de quatre ans. Il représente un T.B.S. de 13,11 % en l'an 2000.

L'enseignement moyen (second cycle du secondaire) est composé d'une filière d'enseignement général et d'une filière d'enseignement technique et professionnel (4,2 % de T.B.S. en l'an 2000).

L'enseignement supérieur comprend l'ensemble des formations du post-moyen.

- *L'éducation non formelle* comprend l'alphabétisation (19,9 % de taux d'alphabétisation dont 10,6 % de femmes en 2000), les écoles confessionnelles et la formation de personnel enseignant. La population cible est constituée par les jeunes et les adultes non scolarisés ou prématurément déscolarisés.

Le système éducatif nigérien en général et l'enseignement primaire en particulier est confronté à des difficultés de tout genre. Ces difficultés malheureusement on un impact sur le développement curriculaire.

I. PROBLÈMES DU SYSTÈME ÉDUCATIF

Les problèmes que rencontre le système éducatif sont essentiellement liés à l'accès, à l'équité et disparité, à la qualité, et au financement.

1. Au niveau de l'accès

En l'an 2001 le taux de scolarisation est de 37,3 %, un des plus faibles de la sous-région. Tous les efforts consentis se sont focalisés surtout sur les infrastructures et les enseignants sans tenir compte le plus souvent de l'expression d'une demande réelle qui dépend entre autres des coûts (fournitures scolaires, scolarité, transport, coût d'opportunité…) et des bénéfices (relations directes entre l'école et les besoins actuels des communautés).

Le coût d'opportunité est très élevé : 55 % pour les garçons et 58 % pour les filles au niveau national. En milieu rural il est de 66 % pour les filles et 60 % pour les garçons et en milieu urbain 27 % pour les garçons et 28 % pour les filles.

Enfin il faut noter la faible participation de l'enseignement privé à l'effort de scolarisation car ne contribuant que pour 1,4 % du T.B.S.

2. Au niveau de l'équité et disparités

On constate :

- De fortes disparités entre régions et entre zones rurales et zones urbaines : Niamey enregistre un T.B.S. de 98,99 % contre seulement 23,63 % pour Zinder. Les zones rurales avec 80 % de la population totale du pays enregistrent un taux de scolarisation de 27,8 % contre 50,9 % pour les zones urbaines.
- Des disparités entre filles et garçons. Les filles représentent 39,35 % des effectifs scolarisés correspondant à un taux de scolarisation de 26,9 %.

3. Au niveau de la qualité et efficacité

Si la qualité d'un système s'apprécie à travers la réalisation des objectifs qu'il s'est fixé par une utilisation optimale des ressources mises à sa disposition, les résultats enregistrés sont très insuffisants. En effet l'enseignement primaire est caractérisé par :

- Un faible taux de réussite aux CFEPD (Certificat de fin d'étude du premier degré) : 33,8 % seulement ;
- Un taux de transition du primaire au premier cycle très faible (31,3 %) ;
- Un taux de survie CI-CM2 de 59,9 % avec une proportion de 56,8 % pour les filles et 62,4 % pour les garçons ;
- Un taux moyen de redoublement de 12,9 % ;
- Une inadéquation entre les programmes enseignés et les réalités et les conditions de vie des populations nigériennes.
- Un taux d'encadrement très faible.

4. Au niveau de la gestion des ressources

On note :

- Des difficultés de gestion des ressources humaines : les ratios élèves/enseignement diffèrent selon les régions et varient de 18 à 39,3 %.
- Un déséquilibre dans l'allocation des ressources financières entre le fonctionnement et l'investissement (4 % pour l'investissement contre 86 % pour le salaire).
- Un coût unitaire élève élevé : il est de 36 972 F soit 0,3 fois le P.I.B. par tête.
- Des coûts de construction élevés : 5 137 000 F pour une classe en dur
- Un financement quasi exclusivement à la charge de l'État.

II. PROBLÈMES LIÉS AUX CURRICULA

- De façon générale les programmes d'enseignement ne répondent pas aux réalités locales et aux attentes des populations. La situation est la suivante :
- Une insuffisance de formation des enseignants.
- Les compétences attendues de l'élève en fin de cycle ne sont pas énoncées, les apprentissages se limitent à une énumération des notions et de connaissances.
- Une insuffisance notoire des manuels et une absence de véritable politique du livre. A ceci il faut ajouter des difficultés de production, stockage, distribution des manuels scolaires.

- L'absence de politique linguistique qui freine l'élan vers l'utilisation pleine et entière des langues nationales comme médium ou matière d'enseignement.
- La prééminence de l'enseignement général a pour conséquence le faible développement du potentiel scientifique et technologique national.
- La distanciation entre le secteur de l'éducation et les réalités nationales qui se traduit par une inadéquation entre la formation et les besoins du marché de l'emploi et en conséquence par un chômage de plus en plus préoccupant des jeunes diplômés.
- Les difficultés d'intégration des dimensions novatrices dans les programmes d'éducation : santé, nutrition, sida, environnement, culture de la paix etc.

III. LES SOLUTIONS OU TENTATIVES DE SOLUTIONS

Pour résoudre les difficultés que rencontre le système éducatif nigérien le Gouvernement a y mis en œuvre un certain nombre de mesures visant à accroître l'efficacité du secteur.

1. De façon générale il s'agit de :

- La réduction des coûts unitaires par la limitation du nombre d'instituteurs (14 %), l'arrêt du recrutement automatique dans la fonction publique, le recrutement des volontaires de l'éducation, la réduction des coûts de construction des classes de l'ordre de 50 %.
- L'accroissement des ressources financières allouées à l'enseignement primaire afin d'augmenter substantiellement le taux de scolarisation et améliorer la qualité de l'enseignement. Ces ressources ont permis la création de 520 postes budgétaires nouveaux annuellement, le recrutement de 720 maîtres chaque année formés dans les écoles normales, l'augmentation des dépenses pédagogiques, la construction et l'équipement de cent vingt salles de classe par an au primaire.
- L'utilisation des classes à double flux dans les centres urbains ou les effectifs sont importants.
- L'utilisation des classes multigrades dans les zones rurales où les effectifs sont faibles afin d'utiliser rationnellement les ressources humaines et matérielles disponibles.
- L'initiation des écoles communautaires pour faire face à la demande non satisfaite de scolarisation. Seulement la faiblesse des capacités de mobilisation des ressources par les populations peut être une contrainte au développement de ces initiatives.
- La création des écoles spécialisées pour la prise en charge des enfants handicapés et/ou caractériels.
- L'adoption d'une loi d'orientation du système éducatif nigérien en 1998 pour contribuer à relever les défis de l'éducation au Niger.
- L'élaboration d'un programme de développement de l'éducation au Niger visant l'amélioration quantitative et qualitative de l'instruction des plus démunis que sont les populations rurales et les femmes afin de contribuer activement à la lutte contre la pauvreté.

2. Au niveau des curricula

Les programmes actuels, bien qu'ils comportent beaucoup de lacunes ont été remaniés à la fin des années 70. Cette reforme s'est attaqué essentiellement à :

- La retouche des contenus pour essayer de les adapter aux besoins du milieu.
- La révision des programmes d'enseignement.
- L'élaboration des manuels en fonction de ces programmes.
- La formation des personnels d'encadrement à l'esprit des nouveaux programmes.
- La création d'un comité national du livre scolaire chargé d'élaborer une grille d'évaluation des manuels en usage dans les écoles primaires et secondaires.
- L'introduction des nouveaux contenus éducatifs en matière de santé, environnement, population, etc.
- La réforme des écoles normales pour qu'elles répondent au mieux aux exigences de la formation professionnelle en assurant dans toutes les écoles normales des formations initiales et continues.
- La transformation de la faculté de pédagogie en école normale supérieure afin d'assurer la formation initiale et continue des conseillers pédagogiques et inspecteurs, professeurs des lycées et collèges.
- La création de plus de 500 cellules d'animation pédagogique pour répondre aux besoins d'auto formation continue des enseignants.
- La refondation des curricula dans le cadre du programme décennal de développement de l'éducation au Niger (2002-2012), ce qui permettra l'amélioration de la pertinence et de la qualité des apprentissages, la création d'un environnement lettré pour consolider et développer les acquis des alphabétisés.

3. Historique des réformes

Jusqu'à son accession à l'indépendance en 1960, le Niger n'avait pas de programmes d'enseignement et les manuels scolaires utilisés dans les établissements étaient importés. Cette dépendance vis-à-vis de l'extérieur a suscité une crise au sein de l'enseignement qui a engendré plusieurs tentatives de réformes. Il a fallu véritablement :

- 1974 pour voir la création d'un secrétariat permanent à la réforme de l'enseignement et au plan de scolarisation, la création d'un certain nombre d'écoles expérimentales.
- 1987 Elaboration des premiers programmes d'enseignement par les nigériens. Le processus d'élaboration des manuels a été amorcé peu après avec la création d'un comité national du livre scolaire qui avait

pour mission d'analyser la conformité des démarches pédagogiques préconisées et la congruence des manuels avec les réalités socio-culturelles du pays.

- Depuis 1998 avec l'adoption d'une loi d'orientation du système éducatif nigérien le 1er juin 1998, le Niger a entamé une réforme du secteur éducatif.

Cette réforme en cours se base sur le diagnostic du système actuel.

IV. PRESENTATION DE LA RÉFORME EN COURS

Pour relever les défis de financement, d'équité et de disparités, de démocratisation de l'accès, de la qualité et de la pertinence des apprentissages et des formations, la loi 98-12 du 1er juin 1988 a précisé en ces termes les finalités de la politique éducative nigérienne en son article 12 : « La politique éducative nigérienne a pour finalité l'édification d'un système d'éducation capable de mieux valoriser les ressources humaines en vue d'un développement économique, social et culturel harmonieux du pays. Elle vise le développement des capacités intellectuelles, physiques et morales, l'amélioration de la formation en vue d'une insertion sociale et professionnelle et le plein exercice de la citoyenneté ».

1. Objectifs visés

- Former des femmes et des hommes en mesure de conduire dans la dignité leur vie civique et professionnelle ;
- Former des hommes et des femmes responsables, capables d'initiative, d'adaptation, de créativité et de solidarité ;
- Cultiver les vertus propres à l'épanouissement de l'individu, à la promotion et à la défense de la collectivité ;
- Garantir à tous les jeunes, sans discrimination, l'accès équitable à l'éducation ;
- Éradiquer l'analphabétisme ;
- Développer l'enseignement technique et la formation professionnelle sur le plan qualitatif et quantitatif en rapport avec l'environnement socio-économique du pays ;
- Développer la recherche en général et la recherche appliquée en particulier ;
- Identifier et éradiquer les freins socio-économiques et culturels, les handicaps pédagogiques et autres obstacles entravant le plein épanouissement de la fille et de la femme dans le processus d'apprentissage.

V. CONTENUS ET MÉTHODES

1. Au plan des contenus

- La formation est centrée sur les réalités objectives du milieu tout en tenant compte de l'évolution économique technologique, sociale et culturelle du monde ;
- Un accent particulier est mis sur la valorisation de l'enseignement scientifique et technologique ; la préservation et la protection de l'environnement ;
- D'autres dimensions ont été introduites. Il s'agit : des principes de la démocratie, le sens du patriotisme, de l'unité nationale, de l'unité africaine et des valeurs de la civilisation universelle ; de l'esprit de solidarité, de justice de tolérance et de paix.

2. Au plan des méthodes

Les méthodes utilisées visent à :

- Privilégier l'esprit d'observation, d'analyse et de synthèse.
- Allier la théorie à la pratique ;
- Créer et stimuler l'esprit de créativité, d'initiative et d'entreprise.

Pour accompagner la réforme, des structures ont été mises en place du niveau central jusqu'au niveau local afin de mettre un accent particulier sur la décentralisation du système. Il s'agit :

- Des directions centrales au niveau du ministère.
- Des directions régionales de l'éducation (DRE) dans chacune des huit régions du pays.
- Des inspections des enseignements de base et moyen.
- Des structures consultatives : conseil national de l'éducation (CNE), conseil régional de l'éducation (CRE), conseil sous-régional de l'éducation (CSRE) et conseil local de l'éducation (CLE)

3. Langues d'enseignement

L'enseignement bilingue a été consacré par la loi d'orientation de 1998. Au cycle primaire la langue maternelle ou première devient la langue d'enseignement et le français matière d'enseignement à partir de la première année.

4. Les manuels utilisés

Au Niger, le processus d'élaboration des manuels scolaires a été amorcé après la création d'un comité national du livre scolaire chargé de construire une grille d'évaluation des manuels en usage dans les écoles primaires et secondaires.

Les livres scolaires sont élaborés par l'Institut national de documentation, de recherche et d'animation pédagogique (INDRAP). Ces manuels sont généralement les seuls utilisés dans lesdits établissements scolaires du secteur public comme du secteur privé.

Après la conception du manuscrit par l'INDRAP, l'édition est confiée à un professionnel étranger, le Niger ne disposant pas de maison d'édition.

Il faut noter qu'au niveau de l'enseignement secondaire l'INDRAP n'a réalisé jusqu'à présent que les manuels en anglais, tous les autres manuels sont conçus et importés de l'extérieur.

VI. ANALYSE DU TEXTE DE LA RÉFORME

Par rapport aux objectifs fixés les points forts de la réforme se résument essentiellement à :

- La décentralisation du système consacrée par les textes ;
- La consécration du partage des coûts de l'éducation et l'implication de tous les acteurs du système dans la gestion et la mobilisation des ressources ;
- La mise en place des structures consultatives en matière d'éducation ;
- La mise en œuvre d'un dispositif de suivi et évaluation du système ;
- L'introduction de l'enseignement bilingue.

1. Les points faibles

- Difficultés de rendre effective la décentralisation par manque de moyens ;
- L'application des textes sur le partage des coûts de l'éducation est lente à cause des difficultés de prise en charge de certaines dépenses de l'éducation par les collectivités et communautés ;
- Le dispositif de suivi évaluation n'est pas fonctionnel ;
- Le développement curriculaire n'a pas été adapté aux nouvelles exigences de la réforme : programmes inadéquats, insuffisance de la formation des maîtres, manque de manuels et de matériels didactiques de support, pénurie d'enseignants qualifiés et de personnel d'encadrement (conseillers pédagogiques et inspecteurs).
- L'enseignement bilingue est resté à l'état d'expérimentation compte tenu des difficultés de tout genre : choix des langues, élaboration et production des manuels, formation des enseignants et du personnel d'encadrement, généralisation, dispositif pédagogique etc.

Pour relever les défis auxquels est confronté le système éducatif nigérien et dans le cadre de la loi 98-12 du 1er juin 1998, le Gouvernement est en train d'élaborer un programme décennal de développement de l'éducation au Niger pour la période 2002-2012. Ce programme vise essentiellement à :

- Renforcer et développer les capacités institutionnelles du Ministère de l'éducation nationale.
- Développer un partenariat actif et diversifié en faveur du système.
- Accélérer la scolarisation surtout en milieu rural et notamment au profit des jeunes filles.
- Promouvoir l'éducation non formelle.
- Réformer et adapter l'offre d'éducation à la demande afin de réduire les disparités entre régions, entre zones rurales et zones urbaines et entre garçons et filles.
- Renforcer et développer la formation professionnelle.
- Améliorer la qualité de l'éducation par la refondation des curricula. La conception des nouveaux curricula de l'éducation doit tendre vers un système en partie modulaire susceptible de conserver à l'école son unité tout en la rendant plus attrayante pour les populations.

VII. ARTICULATION

Par rapport aux finalités du système éducatif nigérien telles qu'elles sont énumérées dans la loi et aux objectifs poursuivis par le programme décennal de développement de l'éducation (PDDE), la refondation des curricula sera axée sur :

1. La conception des curricula

Les futurs programmes d'enseignement doivent définir les compétences de base pour chaque ordre d'enseignement et pour chaque sous-cycle. L'organisation du curriculum sera de type modulaire. Autour d'un noyau central (socle de compétences de base) qui s'impose à tous et qui constitue la référence pour la certification, vont se greffer des modules optionnels prenant en compte les réalités spécifiques aux groupes cibles et les conditions socio-économiques locales. Pour cela les étapes suivantes doivent être respectées :

- Mise en place d'une commission curriculaire.
- Évaluation des programmes en vigueur.
- Élaboration du curriculum.
- Mise à l'essai du curriculum.
- Élaboration des supports didactiques.
- Formation des enseignants.

2. Assouplissement des rythmes scolaires

La souplesse des rythmes scolaires concernera surtout l'organisation de l'année scolaire et de la semaine de travail. L'objectif visé est d'assumer une certaine flexibilité du calendrier scolaire afin de prendre en compte les conditions de vie locales (pastoralisme, éloignement de l'école, activités domestiques et champêtres, etc.). Une liberté sera accordée aux établissements dans l'organisation de leur calendrier.

3. Introduction de l'enseignement bilingue

Il s'agira de mettre en place un dispositif visant l'expérimentation de l'enseignement bilingue en vue de son extension progressive. Cette stratégie doit être fondée sur le processus de développement curriculaire.

4. Amélioration du système d'évaluation

Remplacer les contrôles traditionnels par le système de contrôles continus à l'intérieur des sous-cycles et l'institution d'examens d'un sous-cycle à l'autre ;

- Concevoir des épreuves standardisées afin de constituer des banques d'items relatives aux compétences de base pour chaque cycle et sous-cycle nécessaires au passage au cycle supérieur.

- La mise en œuvre du dispositif du développement curriculaire suppose :
- L'amélioration de la qualité de la formation initiale des enseignants (équipements pédagogiques, moyens de fonctionnements nouveaux programmes d'études des écoles normales).
- L'amélioration de la formation continue des enseignants par la restructuration et le redynamisation des CAPED, la formation des enseignants aux nouvelles approches pédagogiques et à la gestion des classes multigrades.
- L'amélioration du système de formation initiale des inspecteurs et conseillers pédagogiques.
- Le renforcement des activités de suivi d'évaluation sur le terrain.
- La dotation de façon suffisante et rationnelle des écoles en livres et manuels scolaires et autres guides d'auto apprentissage.

Ce programme doit contribuer à réduire la pauvreté en offrant aux couches sociales vulnérables, les possibilités de se former et de mieux préparer leur avenir. Il vise à terme les résultats suivants :

5. Au plan quantitatif

- Porter le taux de scolarisation primaire de 34,1 % en 2000 à 70 % en 2012.
- Porter le taux brut de scolarisation des filles au primaire de 27 % en 2000 à 68 % en 2012.
- Accroître le taux d'alphabétisation de 19,9 % en 2000 à 38 % en 2012.
- Créer 50 centres de formation en développement communautaire.

6. Au plan qualitatif

- Porter le taux de survie au primaire à 80 % en 2012.
- Réduire le taux de redoublement au CM2 de 37 % en 2000 à 15 % en 2012.
- Porter le taux de réussite en alphabétisation de 42 % en 2000 à 65 % en 2012.

VIII. LES CLASSES À DOUBLE FLUX

Confronté aux problèmes de scolarisation, d'injustice sociale et de contraintes économiques, l'État du Niger a envisagé l'introduction des classes à double flux dans les villes et la multiplication des classes multigrades en zones rurales. L'objectif visé est la réduction du coût unitaire de l'éducation et l'accès à l'école au maximum d'enfants d'âge scolaire.

1. Définition du concept

Le double flux (ou double vacation) est un système d'enseignement où un même maître dans une classe donnée dispense alternativement son enseignement à deux groupes d'élèves d'un même niveau.

Ainsi le maître reçoit par rotation, tantôt le groupe A (ou cohorte A) tantôt le groupe B pour une demi-journée de classe.

2. Objectifs

- Réduire les coûts unitaires de l'éducation.
- Augmenter le taux de scolarisation.
- Rentabiliser au maximum les infrastructures.
- Réduire les effectifs pléthoriques des classes.

3. Fonctionnement

Au Niger, deux formules ont été expérimentées :
- *Formule 1* : un maître - une classe - deux cohortes.
- *Formule 2* : deux maîtres - deux classes - trois cohortes.

La formule 2 a été rejetée car son organisation est plus complexe et déroute les élèves. Après l'expérimentation c'est la formule 1 qui a été retenue. Au niveau de l'emploi du temps, le schéma de fréquentation est le suivant :

	Lundi	Mardi	Mercredi	Jeudi	Vendredi	Samedi
Matin	A	B	A	B	A	B
Après-midi	B	A		A	B	

4. Horaires et emplois du temps

Les horaires dans un emploi du temps tiennent compte des recommandations des médecins, psychologues et pédagogues selon lesquelles il est indispensable d'harmoniser les rythmes scolaires aux rythmes des enfants. C'est ainsi que :
- Les plages de fatigue (vers 11 heures) sont consacrées, à la poésie et à la lecture.
- Les journées sont équilibrées : alternance des disciplines, mais régularité de leur présence aux même heures au cours de la semaine.
- Les matinées sont réservées aux disciplines fondamentales et les après-midi aux activités sportives, culturelles et pratiques.
- La durée des leçons est fixée à 20 minutes dans les petites classes pour tenir compte de la durée du pouvoir d'attention des enfants.

5. Organisation d'une classe

Il n'est pas nécessaire de préparer deux fois la même leçon ou d'avoir plusieurs cahiers de préparation. Il suffit de numéroter les leçons au fur et à mesure selon

l'ordre de l'emploi du temps et suivant les matières enseignées. Les leçons dispensées au groupe A n'auront pas besoin d'être préparées le soir pour le groupe B.

À la fin de la semaine chaque cohorte aura normalement reçu le même nombre de leçons pour chaque matière figurant à l'emploi du temps.

Pour occuper le temps libre des élèves qui ne sont pas en classe, il a été introduit des activités « extra-muros ». Elles sont en dehors des heures de cours et conduites en collaboration avec les parents d'élèves.

Une indemnité mensuelle de 20 000 F est allouée à chaque maître chargé d'une classe à double flux pour compenser les heures supplémentaires (40 heures au lieu des 30 heures traditionnelles).

6. *Évaluation de l'expérience*

L'évaluation du système double flux au Niger a révélé :

- *Un accroissement des effectifs* : Au CI, environs 2000 élèves supplémentaires sont recrutés chaque année. Cela a permis une augmentation sensible du taux de scolarisation. Dans les classes traditionnelles cette augmentation ne peut être obtenue que si l'effectif par classe est porté à 83.
- *Une réduction des coûts unitaires* : En double flux pour un effectif de 50 élèves par cohorte, le coût unitaire par élève est de 13 500 F (malgré la prime octroyée aux maîtres). Dans une classe traditionnelle de 67 élèves le coût unitaire par élève s'élève à 17 500 F.

Il faut néanmoins noter qu'au niveau des performances des élèves les pertes globales d'acquisitions en double flux s'élèvent à 7 points par rapport à une classe traditionnelle. Ceci peut s'expliquer par l'insuffisance du suivi des classes à double flux, la non adaptation des programmes à ce système, la nouveauté de l'expérience par rapport aux classes traditionnelles, l'insuffisance de la formation des enseignants et du personnel d'encadrement pour la mise en œuvre de ce système.

IX. LES MAÎTRES FACE AUX NOUVEAUX CURRICULA

Le système éducatif nigérien est caractérisé par une efficacité interne et externe doublée à la rareté des ressources internes.

Dans un contexte de forte demande, le Niger se doit d'adopter l'offre d'éducation aux caractéristiques de cette demande. En effet l'accent a été mis jusqu'à présent surtout sur la construction des classes et le recrutement des enseignants pour relever le taux de scolarisation.

Le constat en l'an 2000 est que le taux de scolarisation est de 34,1 % l'un des plus faible de la sous-région malgré les efforts consentis et les moyens mobilisés. Ce taux cache d'autres réalités notamment des forts taux d'échecs aux examens et l'insuffisance des manuels scolaires. Ce qui pose le problème d'adaptation de l'offre à la demande et par voie de conséquence la qualité de l'enseignement. Il y a donc une réflexion de fonds à mener sur les curricula actuels. Cette réflexion sera axée sur :

- *L'élaboration des nouveaux programmes d'enseignement* : Les programmes actuels sont déconnectés des réalités locales ; il est nécessaire de mettre en place des programmes qui tiennent compte des spécificités régionales et locales, des besoins des populations afin de susciter la demande en éducation.
- *La formation des enseignants et du personnel d'encadrement* : La multiplication des classes à double flux dans les centres urbains (à cause d'une forte demande), et des classes multigrades en milieu rural (à cause de la faiblesse de la demande) exige une formation des enseignants et du personnel d'encadrement adaptée à ce type d'enseignement.

En l'an 2000 l'enseignement primaire au Niger comptait 2 467 classes multigrades (19 % du nombre de classes) toutes situées en zones rurales. Malgré l'importance des effectifs et le cumule des niveaux aucune modification majeure n'a été apportée dans l'environnement pédagogique afin d'améliorer les conditions d'enseignement/apprentissage. La formation initiale dans les écoles normales d'instituteurs (ENI) prépare peu ou pas du tout les futurs enseignants à la gestion de ces classes. Bien plus, avec la mise en œuvre des programmes d'études de 1987 (programmes à structure linéaire), les enseignants ont des difficultés dans la gestion des classes multigrades.

Très souvent ils se contentent de faire cours pour un seul niveau, ce qui a pour conséquence une perte de temps pour l'autre niveau, la dégradation du climat de travail dans la classe et la baisse du niveau de performance des élèves.

Pour préparer les enseignants à l'organisation et à la gestion des classes multigrades, le Ministère de l'éducation nationale avec le concours de l'UNESCO a élaboré un guide sur la gestion des classes multigrades et l'élaboration des emplois, les objectifs visés étant : d'initier les enseignants à l'élaboration des emplois de temps, de former les enseignants à la gestion des classes multigrades à deux ou trois niveaux ; de préparer les enseignants à la gestion des écoles à classe unique.

Plus de 150 personnels d'encadrement (conseillers pédagogiques et inspecteurs) ont été formés à l'utilisation de ce guide qui a leur tour se devaient de multiplier la formation aux niveaux des cellules d'animation pédagogique (CAPED) qui sont des centres de regroupement de formation et d'auto formation des enseignants.

En effet les CAPED sont des centres d'échange d'expériences et de résolution des problèmes pédagogiques que rencontrent les enseignants dans la pratique quotidienne de la classe avec l'appui du personnel d'encadrement du terrain.

Actuellement les CAPED rencontrent des difficultés notamment le manque de moyens, l'insuffisance du personnel d'encadrement et l'éloignement des écoles.

À ces difficultés s'ajoutent l'insuffisance des manuels, des fournitures et matériels pédagogiques de support.

Quelle que soit la motivation des enseignants si les programmes restent inadaptés aux réalités, la formation insuffisante et si les conditions d'enseignement apprentissage demeurent précaires, les résultats seront toujours en deçà des espérances.

X. L'ENSEIGNEMENT BILINGUE

L'expérimentation de l'enseignement bilingue au Niger a été introduite depuis 1973 dans le cadre du projet de réforme de l'enseignement. Cette expérimentation a porté sur cinq des dix langues nationales reconnues dans quarante-deux écoles.

Les résultats des différentes évaluations effectuées de 1975 à 1984 ont montré que les écoles expérimentales bilingues sont plus performantes que les écoles traditionnelles monolingues sur le plan des acquisitions cognitives.

Mais, depuis un certain temps les résultats aux examens des élèves des écoles expérimentales sont moins bons que ceux de leurs collègues des écoles traditionnelles. Cette situation s'explique par une durée indéfinie de l'expérimentation, le manque de véritable politique linguistique, le manque de supports juridiques, l'insuffisance de matériels didactiques et de formation à tous les niveaux, le manque de suivi, la non prise en compte des langues nationales aux examens de fin d'année.

Avec l'adoption de la loi 98-12 du 1er juin 1998 l'enseignement bilingue a été revalorisé puisque la langue maternelle devient langue d'enseignement et le français matière d'enseignement. Ce qui donne une base juridique de l'institution d'une éducation bilingue au Niger.

Dans le cadre du programme décennal de développement de l'éducation au Niger,

2002-2012, des stratégies d'expérimentation, d'extension et de généralisation de l'enseignement bilingue ont été identifiées en conformité avec le développement curriculaire de l'ensemble du système.

La mise en application des dispositions de la loi implique la révision des programmes scolaires actuels car ils ne sont ni entièrement adaptés aux réalités locales, ni à la demande actuelle du marché, ni à un enseignement bilingue. Trois questions fondamentales se posent au niveau de l'enseignement bilingue : le choix de la langue, la formation des enseignants ; les modalités de généralisation.

1. Choix de la langue nationale

Il s'agit de définir à l'avance la langue qu'il faut associer au français dans chaque école en vue de l'implantation de l'école bilingue. Les choix vont s'opérer différemment selon les milieux (rural ou urbain) et les configurations linguistiques de ces milieux (monolingue ou plurilingue).

En général les zones rurales (ou pastorales) sont monolingues, à ce niveau le problème de choix de la langue ne se pose pas. Par contre dans les centres urbains et semi-urbains plusieurs langues coexistent, celles-ci pouvant être à force égale ou les unes dominées par les autres.

Dans ces conditions, la description socio-linguistique de chaque localité s'impose. Il s'agit d'y répertorier tous les idiomes existants, d'estimer leurs poids démographiques respectifs et leur dynamique, de définir leurs rapports de force et leur répartition dans la localité afin de recueillir les représentations qui se rattachent à ces langues.

2. Formation des enseignants

Avant la généralisation de l'enseignement bilingue tous les enseignants du primaire doivent être aptes à enseigner dans une classe à enseignement bilingue. Cela suppose de les former à la nouvelle approche pédagogique et à une quadruple compétence : compétence linguistique et métalinguistique en une langue au moins mais aussi en français.

Il faut donc falloir identifier d'abord quel enseignant parle quelle(s) langue(s) nationale(s) et quelles sont ses préférences en matière de formation linguistique ? Ces données sont indispensables à la formation des équipes de formateurs, à la planification des sessions de formation des enseignants et à leur affectation à l'issue de leur formation.

Dans la situation actuelle du Niger cette stratégie va engendrer des coûts énormes de formation. Elle pose aussi le problème de gestion du personnel car il peut y avoir trop d'enseignants dans certaines zones et moins qu'il ne faut dans d'autres.

Enfin il faut élaborer et produire des manuels dans chacune des langues nationales enseignées.

3. Modalités de généralisation

Cette généralisation peut s'effectuer de manière globale (en touchant le cycle primaire en une seule année) ou graduelle (en touchant progressivement les cours les uns après les autres). Le scénario retenu au Niger est celui de la généralisation graduelle représentée en Tableau 2. Ce scénario permet de maîtriser le processus de la réforme sur le plan technique et financier.

Le développement curriculaire doit nécessairement tenir compte des difficultés que rencontre l'enseignement bilingue actuellement au Niger notamment l'insuffisance de la formation des enseignants et du personnel d'encadrement, l'insuffisance du matériel didactique, le manque de collèges bilingues pour la poursuite des études des élèves, le choix des langues nationales.

TABLEAU 2. La généralisation graduelle de la réforme

Années/actions	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007
Évaluation et élaboration des curricula	CP CE CM				
Élaboration des guides pédagogiques	CP	CE	CM		
Expérimentation évaluation		CP	CE	CM	
Réécriture des manuels			CP	CE	CM
Extension généralisation			CP	CE	CM

7. Nigeria

Gidado Tahir

This paper attempts to give an overview of the Nigerian educational policy by appraising it and providing a justification for Universal Basic Education (UBE) within the curriculum reform in Nigeria.

I. PROBLEMS AND BACKGROUND

Universal Basic Education (UBE) emerged as a consequence to the Jomtien Declaration on Education for All (1990) and was reaffirmed by the Dakar Declaration (2000). Prior to this, there had been a global concern that educational policies in many parts of the world, especially Sub-Saharan Africa and Asia, ignored early childhood care and pre-school education and restricted the goals of primary education. In Nigeria, the goals of primary education did not include life-skills. An overview of the education system is summarized below.

1. The Nigerian education system

The Curriculum Conference of 1969 gave birth to a change in Nigerian educational policy. The desire to develop a more relevant education system that could serve as a tool for accelerating national growth and development had been strong since independence in 1960. The NPE, first published in 1977, had undergone revisions in 1981, 1995 and 1998. The policy is unequivocal in its insistence on functionality, universality and quality as the key objectives of the country's educational endeavours.

The importance of early childhood/pre-primary school education is underscored. However, it has to be provided largely through private initiatives. At the formal level, a system of six-year primary education, three-year junior secondary education, three-year senior secondary education and four-year tertiary education (6-3-3-4) system is planned. The first nine years of the formal level is one of the primary concerns of the UBE programme. The other concern is literacy and adult, non-formal education. Education policy also conveys the values that teachers should inculcate into learners and it spells out the objectives of each level of the education system. Policies are also expressed for the teacher and special education programmes.

2. Problems with the National Policy on Education

Perceived problems with the National Policy on Education are as follows:

- neglect of early child-care education, which is left to private initiatives;
- narrow goals of primary and secondary education (with the exclusion of life-skills such as health/HIV/AIDS education, population and family life, etc.);
- emphasis on formal education at the expense of the non-formal targeting of children and adults in difficult circumstances;
- emphasis on formal education at the expense of technical, pre-vocational and vocational skills at all levels;
- attendant social problems of unemployment resulting from graduates with excessive ambitions but no skills looking for white-collar jobs;
- tendency for society to relegate technical education to the background in preference to university education;

- under-utilization and non-committal attitude of communities/societies to ownership of primary education.

3. Problems with the school system

In Nigeria today the public school system is confronted with the following problems:

- overstretched facilities;
- a population explosion in recruitment into schools;
- poorly trained teachers;
- poor remuneration in teachers' wages leading to poor motivation and low morale;
- little or no plans for career development for teachers;
- inflexible curricula;
- inadequate supervision of schools;
- lack of teacher supervision.

The policy on education, prior to the launching of the UBE, created schools and communities that looked towards the government to satisfy its needs. Efforts at community participation, such as setting up parent/teacher associations, were not standardized but left to the discretion of succeeding administrations.

4. Problems with the curriculum

Prior to UBE, curricula were rigid and inflexible, focusing on formal education at the expense of technical, vocational and pre-vocational skills. Technical equipment was imported and distributed to secondary schools to facilitate training in technology, but few technicians were available to operate it. In some cases, communities were unable to provide an environment that was conducive to achieving proficiency in operating the machines. Specifically, the curriculum was faced with problems such as:

- inflexibility;
- non-availability of funds for the Nigerian Education Research and Development Council (NERDC) to review education on a regular basis;
- limited capacity-building for curriculum experts;
- inability to respond to the need of the immediate environment.

5. Preferred solutions to the education system

The Universal Basic Education (UBE) attempts to offer solutions to the perceived weaknesses and shortcomings in education policy. The UBE objectives, based on the Jomtien and Dakar Declarations, are to ensure the following:

- the expansion of early childhood care and development activities, especially for disadvantaged and handicapped children;
- universal access to basic education in the first nine years of school from primary one to junior secondary;
- compensatory education to school drop-outs;
- reduction of adult illiteracy through the provision of education to adult illiterates and those in difficult circumstances, such as migrant fishermen, farmers and women;
- expansion of basic education and training in essential life-skills and learning-to-learn skills;
- increased teaching of the knowledge, skills and values required for better living.

6. UBE vision and curriculum development

Curriculum delivery has been and still is the bedrock of any educational goal. Universal Basic Education (UBE) is geared towards a new philosophy that asks what type of UBE would serve the greatest good. Other questions include:

- What type of Nigerian citizen should the UBE produce?
- What specific learning experience(s) should such a person acquire?
- How can Nigerian UBE be promoted and with what means?

7. UBE vision

The UBE vision aims at righting the wrongs of the unfulfilled curriculum dream. The old curriculum turned out graduates who were not self-reliant, and only fit for white-collar jobs. Life-skills and coping skills were ignored. Technical and pre-vocational skills were relegated to second place behind Western education, which further promoted white-collar jobs. Emphasis was also placed on formal education at the expense of the non-formal.

The new UBE vision is a bottom-up approach with teachers as end-users playing active roles in the curriculum process. The teachers are involved in the curriculum review and text development processes. The learners benefit from an environmentally friendly text, while the pedagogical process is interactive and child-centred. The UBE vision encompasses every child within formal, non-formal and informal settings. Philosophically, it will have to consider four sets of factors:

- *the learners:* from primary to the third year of junior secondary, their status, characteristics, hopes, fears and aspirations;
- *the primary education phase:* the values, attitudes, knowledge and skills acquired at this phase and the need to consolidate them and broaden their scope at the junior secondary phase;
- *the existing junior secondary system:* its curriculum and other related features and the need to adapt them to the demands of the times, as well as to the special requirements of young people in the twenty-first century;
- a special consideration for those who may be out of school and will need non-formal *complementary approaches* in the junior secondary bracket.

The UBE vision should promote a learner and society-centred philosophy with a curriculum that strives to relate the art of literacy and numeracy to that of skills

acquisition in the primary. It should consolidate the gains of traditional disciplines of languages; maths and science, social science, pre-vocational subjects and technology to the goals of basic education in the junior secondary classes. The subject disciplines highlighted should be used to consolidate literacy, numeracy, life-skills and learning-to-learn skills. Any genuine curriculum development efforts must address this issue.

The UBE vision will produce children who are not limited in content to just knowing, but also doing. The UBE curriculum must strive to do the following:

- teach local arts and crafts (primary and junior secondary);
- teach pre-vocational skills (in the junior secondary);
- teach essential life skills required for daily living, e.g., health and sexuality education, HIV/AIDS education, population and family life education, aesthetics and environmental education, etc.;
- teach learning-to-learn skills;
- teach creative skills;
- teach fundamental human rights and respect for the rights of others;
- teach sports for healthy physical and mental development;
- teach citizenship education and the ideals of democracy;
- teach information technology and scientific knowledge;
- teach cultural values, ethics, morality, discipline and peaceful existence.

8. Specific learning experiences

- The teacher is perceived not as a passive instructor but a helper involved in helping pupils to know and be able to do through interactive contacts.
- Rote learning is discouraged as the outcome of learning achievement.
- The learning environment goes beyond the conventional classroom to the pre-vocational workshop, the school farm, the sports field, etc.
- The curriculum should be enriched with the essentials to equip children who may not be able to go beyond the third year of junior secondary education before entering the job market.
- The new vision should look carefully at the role and objective of examinations within the framework of the UBE vision.
- The objective of assessments should shift from how much a child knows to how much he or she is able to do.

At present, the NERDC has been given approval for the curriculum review of five primary school subjects for the UBE. Emphasis will be placed on multi-grade teaching in parts of the country where the population is sparse.

The National Institute of Nigerian Languages (NINLAN) has also been given approval to develop texts in some Nigerian languages in line with the concept that children learn better when taught in the mother-tongue and that the first three years of primary schooling should focus on this.

9. Current educational reforms

The UBE Commission is a body that tries to co-ordinate all agencies that are directly involved in curriculum and text development, namely: the Nigerian Education Research and Development Council (NERDC); the National Institute of Nigerian Languages (NINLAN); and the National Teachers Institute (NTI). As a result, these bodies should be better placed to share their field experiences in the areas of curriculum reform. The UBE, working closely with related stakeholders, will continue its efforts to promote the new curriculum vision for the twenty-first century.

References

Nigerian Educational Research and Development Council. *National Policy on Education revised.* Abuja, NERDC, 1998.

Nigeria. Federal Ministry of Education. *Education for All (EFA) country report since Dakar and National Plan of Action.* Lagos, Morio Press, 2001.

ANNEX I: Programme

UNESCO International Bureau of Education/Nigeria Sub-regional Seminar/Workshop on Strategies for Teachers Coping with the New Curriculum, Ascon, Badagry, 11–17 November 2001

DAY 1:	Sunday, 11 November 2001
	Arrival of delegates and participants
DAY 2:	Monday, 12 November 2001:Opening day
8.00	Registration
9.35	All participants and invitees seated
9.40	Arrival of Honourable Minister of State For Education, honourable ministers, special advisers and other dignitaries
	Arrival of the Special Adviser to the President on Education, Chief S.K. Babalola
9.45	Arrival of the guest of honour Prof. S.K. Babalola
	A.B. Borishade, Honourable Minister of Education
9.50	Arrival of Lagos State Governor
9.55	Arrival of special guest of honour, Chief Olusegun Obasanjo, GCFR, Commander-in-Chief, Federal Republic of Nigeria
10.00	National Anthem
10.05	Introduction of guests on the high table
10.10.	Presentation of the national participants
10.15	Workshop preview by NATCOM
10.25	Welcome address by Director Educational Support Services
10.45.	Goodwill messages UNICEF, World Bank, USAID DFID, etc.
11.00	Address by the Director, UNESCO-IBE
11.30	Keynote address by the guest of honour, Prof. A.B. Borishade, Honourable Minister of Education
11.40.	Address and formal opening by President, Commander-in-Chief, Federal Republic of Nigeria, Chief Olusegun Obasanjo, GCFR
11.45	Vote of thanks by the Secretary-General of the Nigerian National Commission for UNESCO
11.50	National Anthem
	End of opening ceremony
	Tea break

TIME	Monday	Tuesday	Wednesday	Thursday	Friday
8.30-10.30	Opening	National experts	School visit	National experts	Dialogue meeting
10.30-10.50	Break	Break		Break	Break
10.50-12.30	Introductory activities	Plenary		Plenary	Lunch
12.30-14.00	Lunch	Lunch	Lunch	Lunch	Lunch
14.00-14.30	Workshop1: Languages teaching in the context of the new curriculum	Workshop 2: Mathematics teaching in the context of teachers coping with the new curriculum	Plenary: National Symposium with six lead speakers	Workshop 3: Science and technology in the context of teachers coping with the new curriculum	CLOSING CEREMONY
15.30-15.45	Break	Break	Recreational visit: Border House, Suntan Beach, French-Language Village Museum Cultural Troupe	Break	
15.45-16.15	Synthesis	Synthesis		Synthesis	
16.15-16.45	International expert 1	International expert 2			

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